



Exploratory study of consumer issues in online peer-to-peer platform markets

Task 1 Report



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Executive summary

The **objective** of Task 1 is to provide an indication of the economic importance of the five P2P markets analysed in the study¹, as well as the different P2P business models used. These objectives are met by analysing the services and characteristics of 485 P2P platforms based in the EU and Norway, operationalising the Task 2 survey results and through a review of secondary data and publications.

Consumer protection issues are particularly important considering that **P2P platforms have developed considerably in recent years**: 52% of the platforms in the sample (252) were created in or after 2010. According to the academic literature, the recent increase in P2P transactions is due to P2P market advantages such as lower prices, increased access to goods or environmental concerns. 81% of the platforms in the sample are small or medium-sized (below 10,000 daily visitors), and the literature suggests that P2P markets will continue to grow in the near future.

Service provision

Many platforms aim to address consumer issues through **self-regulatory approaches** via the services they provide to their peers. Platforms facilitate transactions and foster trust among peers through services before, during, and after P2P transactions are concluded. However, these services, and the trust they create may not always be sufficient to fully address the consumer issues identified in the literature.

This report finds that online P2P platforms offer a wide range of services, and that they differ significantly as to how comprehensive their service offer is. However, **most platform services focus on facilitating transactions** and not as much on providing peers with clarity and easy access to complaints handling mechanisms in case something goes wrong. As this report finds, most platform services are concentrated before the transaction phase, and much less after transactions occur.

The review of the services provided by 485 platforms finds that:

- **Pre-transaction services include** peer review and reputation systems (52%), information about applicable regulation and taxes (45%), and advice/rules on safety (48%). Platforms in the sharing/renting accommodation and sharing/renting goods sectors provide fewer pre-transaction trust-building services like peer review systems or identity verification than platforms engaged in sharing/hiring rides, odd jobs or (re)sale of goods.
- **About half of platforms have peer review or peer rating systems.** Platforms facilitating the sharing/renting of accommodation and sharing/renting of goods provide fewer **pre-transaction** trust-building services like peer review systems or identity verification than platforms engaged in sharing/hiring rides, odd jobs and (re)sale goods.

¹ The markets are: (re)sale goods, sharing/renting goods, sharing/renting accommodation, sharing/hiring rides and odd jobs.

- Platforms facilitating the sharing/hiring of rides tend to foster trust before the transaction occurs, whereas platforms in (re)sale of goods sector focus more on reactive monitoring to ensure trust.
- **Platform services in the transaction phase** include T&Cs for platform use– in 86% of cases –, payment services (55%) pricing guidance or price setting (22%). One third (35%) of platforms set T&Cs for P2P interactions. This share varies across the five sectors under study: 27% of platforms in the (re)sale goods sector, 15% in the Sharing/renting accommodation platforms and 17% sharing/renting goods platform.
- **Platform services in the post transactions phase focus on** complaints handling – in 53% of cases. Differences are also evident between sectors: while sharing/hiring rides platforms are more likely to offer insurance, (re)sale goods platforms engage more in monitoring of user behaviour and listings.

Consumer issues linked to platform service provision include:

- **Platforms do not systematically monitor users' compliance with platform rules:** only 30% of all platforms do so, which increases the risk of fraudulent activities. This varies from almost half of the (re)sale goods platforms to only 11% in the sharing/hiring rides sector.
- **Only one quarter of platforms have some form of mechanism to verify the identity of peers and only 1% of platforms provide criminal records checks.** Identity verification is more systematic in the sharing/hiring ride sector. The lack of certainty regarding other peers' identity may create safety issues or complications in case something goes wrong with the transaction.
- **A quarter of all platforms (24%) provide insurance to peers, either included in the price or against an additional charge.** This number is slightly higher in the sharing/hiring rides (31%) and the sharing/renting accommodation (26%) sectors, as potential damages can be higher than in other sectors.
- **Almost half of platforms (48%) do not have a peer review or rating system and no complaints handling mechanism (47%).**
- **Regarding data use and reuse, the study finds that there are gaps in transparency** in how data are used and who they are shared with, which might cause privacy issues for consumers.
- **There is a growing trend to provide services through mobile apps,** with newer platforms more likely to offer app accessibility than older ones. A third (32% of all platforms) provide such apps, but usage varies by market. Purchases via mobile apps will raise new issues and risks linked to the impact of location-based services, effective provision of information on limited capacity of mobile screens and provision of secure payment scheme, including authentication, to prevent unauthorised use.

Monetisation models

Platform business models are determined by the combination of different monetisation strategies and service offers:

- **Transaction fee-based models:** such platforms offer a wide range of services with a focus on pre-transaction services. Their aim is to encourage a maximum number of transactions through as many services as possible, indicating a high level of maturity and financial solidity.
- **Subscription fee-based models:** platforms using this model tend to rely more on pre-transaction services like peer review & reputation systems or identity verification, and less on post-transaction mechanisms like compliance monitoring or insurance.
- **Advertising/data-based models:** such platforms focus more on post-transaction services. There is less of a focus on trust-building, and they adopt more reactive, rather than proactive approaches to consumer protection.

Most often, advertising and data (re)use are used in combination with other monetisation models.

Across P2P markets, significant differences arise: (re)sale goods platforms tend to be more homogeneous and mostly use advertising (80% of market platforms) or data use/reuse (60%). The sharing/hiring rides market features the greatest diversity of monetisation models, while the remaining three P2P markets display moderate levels of heterogeneity.

The results of the screening of platform services and monetisation strategies are combined with data from case studies (Task 4) to develop a typology of three business models in the Final Report of this study.

Economic significance of P2P transactions

This report uses Task 2 survey results from 10 EU Member States to extrapolate median peer expenditure/revenues to the EU28-level. **The model estimates that total peer expenditure in the EU across the five sectors considered in this study is worth EUR 27.9 billion per year, while total peer revenues are estimated at EUR 17.29 billion. The difference of EUR 10.61 billion include platform revenues** but they may include also other costs (tourist tax, delivery costs, add-on services such as insurance).

The difference between peer consumer expenditure and peer providers revenue is **significantly higher in some markets than in others** and it varies between 61% and 81% (61% of total peer expenditure reaches peer providers in the (re)sale goods sector, while 81% does so in the sharing/hiring rides sector). The reason for such differences across sector could include e.g. delivery fees, product warranties in the (re)sale goods sector.

Peer spending is highest on (re)sale goods platforms (EUR 17.8 billion), and amongst collaborative platforms on sharing/renting accommodation platforms (EUR 6.6 billion). **Peer revenues** follow a similar path: peer providers on (re)sale goods platform are estimated to earn EUR 10.8 billion, sharing/renting accommodation

providers earn EUR 4.1 billion, while in the other three sectors peer provider revenues lie at around EUR 800 million.

Expenditure and revenue on both collaborative and (re)sale of goods platforms are driven by a small share of peer consumers and peer providers. More than half of the revenue and expenditure is generated by 10% of peers. This skewedness may be explained by the presence of very active private sellers, or commercial and professional buyers and sellers who transact frequently on P2P markets.

The report finds **large differences in size based on unique visitor numbers between P2P platforms (excluding apps)** both between P2P markets and within them. The websites of (re)sale platforms are by far the most visited and it is in this sector where there are the largest differences in platform size and popularity. The overwhelming majority of sharing/hiring rides or odd jobs platforms (78% and 68% of platforms respectively) are small (defined as <500 daily unique visitors).

1 Introduction

This is the Task 1 report submitted as part of contract CHAFEA 2015 86 02 signed with the Consumers, Health, Agriculture and Food Executive Agency (CHAFEA) on an exploratory study on consumer aspects of peer-to-peer (P2P) markets facilitated by online platforms.

1.1 Aims and objectives of this study

This study is undertaken within the scope of an action covered by Objective 3 of the European Commission's work programme for 2015² within its multiannual consumer programme for the 2014-2020 programming period. Objective 3 aims for the development and reinforcement of consumer rights, through smart regulatory action and improving access to simple, efficient, expedient and low-cost redress, including alternative dispute resolution mechanisms³. The present study complements other national and international initiatives in this field by considering user and consumer aspects and issues in selected online P2P markets.

The overall objective of the present exploratory study is to **explore and construct a picture of the main P2P and sharing economy markets with a focus on user and consumer aspects and issues.**

The study objective is achieved through collecting primary and secondary data from EU Member States and Norway to provide an exploratory analysis of the:

- Indicative economic importance of P2P markets facilitated by online platforms in the EU Member States, and the main P2P business models;
- Main experience, perceptions, expectations and problems of consumers/users in P2P markets facilitated by online platforms in 10 EU Member States;
- Relevance of the EU consumer acquis and other related EU and national legislation in addressing specific issues and problems in the main P2P business models, and in its enforcement, concerning the distinction between P2P and business-to-consumers (B2C) transactions;
- Transparency of business models and effectiveness of self-regulatory mechanisms for verification, redress/complaint handling, fulfilling tax obligations as operated by online P2P platforms,
- Policy options for resolving any major issues or problems identified.

The ultimate purpose of this exploratory analysis is to identify the main issues for consumers in this new and fast developing market and to develop operational policy options that support the highest level of consumer protection in line with the relevant regulatory frameworks at EU and Member-State levels.

² As adopted by the Commission Implementing Decision C(2014)9393 final of 11 December 2014.

³ Article 3(1)(c) of Regulation (EU) No 254/2014.

1.2 Objectives and activities in Task 1

The objective of Task 1 is to gather up-to-date evidence from EU-28 Member States plus Norway to analyse the economic importance of the five P2P markets covered by the study⁴, as well as the different P2P business models used.

To achieve these objectives, Task 1 conducts two data collection activities, namely:

- A **comprehensive literature review** covering scientific publications and grey literature from across the EU-28 and beyond; and
- A large-scale **desk research exercise** to identify and screen 485 online P2P platforms from the 28 EU countries and Norway.

This report brings together all information collected as part of these activities with relevant results of other task reports to determine the (indicative) economic importance of P2P markets at EU level.

1.3 Overview of this report

This report is structured along the key themes of Task 1. The results of the literature review and the platform screening have been merged to feed into all sections of the report.

- **Section 3** describes the consumer protection policy perspective in P2P markets, and how these markets are seen in the academic literature. The section briefly illustrates the economic and geographical expansion of P2P markets in recent years. Section 3 ends with a description of the P2P platform monetisation models as seen by academic researchers.
- **Section 4** provides an empirical description of the main services provided by P2P platforms. The section is based on this study's analysis of 485 P2P platforms. Section 4 ends by identifying three conceptual business/monetisation models which can be applied to P2P platforms.
- **Section 5** estimates the economic significance of P2P transactions across the EU using survey data from the Task 2 survey, as well as desk research findings from Task 1.
- **Section 6** highlights key conclusions of the report.

1.4 Scope of the study

Before discussing the scope of the study, it is important to note that it does not seek to define the "sharing" economy. Its focus on P2P transactions means it has a different scope than many other publications that refer to "sharing economy" or "collaborative economy". While this makes comparisons with other publications more difficult, this delimitation is relevant for addressing consumer issues in transactions between peers facilitated by online platforms.

⁴ The markets, as described below, are: (re)sale goods, sharing/renting goods, sharing/renting accommodation, sharing/hiring rides and odd jobs.

The main scope delimitations in the study, are described below.

First, this study focuses on P2P transactions in markets facilitated by online platforms. The study does not cover regular business-to-consumer (B2C) or business-to-business (B2B) markets. Commercial vehicle loan systems like ZipCar in the UK or Cambio in Belgium, for instance, are excluded. Instead, the study's scope includes businesses, intermediaries and platforms that facilitate P2P transactions.

Second, the study only covers P2P transactions where peers do not know each other personally, and that are facilitated online. This delimitation ensures that the platforms considered in this study are publicly available to a broad range of consumers. Therefore, P2P transactions that occur through direct personal contact, sharing arrangements between closed groups or friends and family, or where the sharing offer is not addressed to the general public are not considered (e.g. BroodFonds in the Netherlands). This also excludes transactions via, for instance, Facebook groups.

Third, the P2P sectors of activity covered in this study are limited to five, namely (re)sale goods, sharing/renting goods, sharing/renting accommodation, sharing/hiring rides and odd jobs. This is assumed to cover the main areas of P2P platform activity that are relevant to the study's aim to explore consumer issues. The five P2P markets covered by the study can be described as follows:

- **(Re)Sale Goods:** platforms for selling goods to other people or buying goods from other people. They include classified listings websites such as Gumtree in the UK, Kapaza in Belgium, Marketplaats in the Netherlands, or LeBonCoin in France. They also comprise marketplaces for specific items such as cars (e.g. the Bulgarian platform Car24), clothes (e.g. Trendsales in Denmark), or transport tickets (e.g. the French platform Kelbillet);
- **Sharing/Renting Goods:** platforms for sharing and renting goods to/from other people. Some platforms of this P2P market allow to share or request items from people in their neighbourhood, such as Peerby in the Netherlands, or Skylib in Norway; or from anywhere (e.g. Trovit in the UK). Some other platforms focus on specific items, such as Kleiderkreisel in Austria (for clothes), Baby Equipment Malta (for baby furniture and equipment);
- **Sharing/Renting Accommodation:** platforms for sharing or renting accommodation to/from other people. They include platforms to find long-term accommodation (e.g. SpareRoom in the UK, Stancja in Poland), holiday rentals (e.g. the Maltese platform Malta holidays, the Lithuanian platform Trumpam), house sharing (e.g. the French platform Appartager) or specific types of accommodation (e.g. the Greek-based platform Campinmygarden);
- **Sharing/Hiring Rides:** platforms for sharing or hiring a ride from/with other people. Platforms of this category offer ride-sharing services (e.g. the Estonian-based platform Taxify, the French BlaBlaCar), carpooling opportunities (e.g. the Hungarian Autosztunk), or car-rental options (e.g. Mobocar in Latvia). Some also offer to rent specific cars, such as

motorhomes (e.g. Rentmymotorhome in the UK) or vans (e.g. Areavan in Spain);

- **Odd jobs:** platforms for hiring non-professionals to perform personal services. The range of services offered includes food delivery (e.g. Foodora in Italy), touristic guide services (e.g. Trip4Real in Spain), or dog-sitting (e.g. Housemydog in Ireland). Some, like the Polish platform Skill Trade, offer a broader range of services from design and graphism to painting or plumbing.

Certain transactions were excluded from the study's scope including customised or tailor-made goods, cultural products (books, films, DVDs, CDs, theatre tickets)⁵, food-sharing activities and real estate transactions⁶, sharing of professional services (e.g. legal advice, accounting and medical services, etc.)⁷, crowdfunding/money lending platforms or regular B2C rental markets.

Fourth, the study excludes platforms which do not pursue a commercial purpose (not-for-profit, charitable private initiatives). This delimitation is important since one of the main aims of this Task 1 report, as specified in subsection 2.1 is to identify the main P2P business models. However, it includes all commercial P2P platforms where peers pay a price or a fee or where they compensate the platform in any other way (e.g. through provision of user data) for access and use.

Fifth and finally, this Task 1 report's geographical scope includes all EU Member States plus Norway. The platform selection focused on **autochthonous platforms** (i.e. platforms created locally) in each country. This approach allowed to better identify the specificities of the P2P market in each Member State with greater accuracy. Where autochthonous platforms could not be found, popular platforms from other (often neighbouring) countries were included if they have a large peer base in the country of study. Of the 485 platforms in the sample, only three (AirBnB, Uber and eBay) were established outside of the EU or Norway. These platforms were included, however, given their popularity and because they have a registered office in an EU country (Ireland for AirBnB, UK for Uber and Luxembourg for eBay). Platforms operating cross-country are accounted in only one Member State, to avoid duplications in the dataset. Only for seven platforms (OLX, Appartager, 2dehands, VivaStreet, KleiderKreisel, Bazar and Recherche Collocation) national versions were considered as independent platforms because apart from the name and the basic web functionality, the platforms appeared to be independent from each other.

⁵ The exclusion of platforms such as eBay's StubHub, an entertainment tickets (re)sale platform, was decided because of specific copyright issues related to such products.

⁶ Food-sharing platforms like EatWith or ShareYourMeal, as well as real estate P2P platforms like Landbuy or LendInvest were excluded because of specific regulatory issues in their sectors of activity.

⁷ Professional services platforms like Freelancer.Com were excluded because they raise specific qualifications and employment issues.

2 P2P markets in policy and literature

This section describes P2P markets based on a review of policy and academic literature. It revolves around the consumer protection issues that might arise in P2P markets, in line with the objectives of the overall study.

It is important to note that P2P transactions are not a new phenomenon, as Schor and Fitzmaurice (2015) suggest.⁸ Over time, P2P transactions have been referred to in different ways in literature and in policy papers.

While this study does not seek to define terms such as “sharing economy” or “collaborative economy”, it is nevertheless important to be aware of the common terms that are used in the literature to describe P2P transactions or the platforms that facilitate them (Box 1). This study, and this section in particular, will refer to papers using these terms insofar as they focus on P2P transactions.

Box 1: Popular terms to describe P2P transactions and platforms in literature

In academic literature, researchers have used various terms to describe P2P transactions and the P2P marketplaces that facilitate them.

Popular terms to describe P2P marketplaces are:

- collaborative consumption (Botsman and Rogers, 2010)⁹,
- collaborative economy (NESTA, 2016¹⁰ and European Commission, 2016),
- access-based consumption (Bardhi and Eckhardt, 2012)¹¹,
- access economy (Rifkin, 2001)¹²,
- on-demand economy (CB Insights, 2015)¹³,
- the mesh (Gansky, 2010)¹⁴, or
- gig economy (Cadman, 2015)¹⁵.

Each of these terms aims to stress a certain distinctive characteristic of the P2P marketplace (e.g. its collaborative nature, enabling role of new digital technologies, flexibility of arrangements, instant access to assets and services).

The results of this literature review serve as a basis for the empirical analysis of P2P platform services in the next section.

⁸ Schor, J. and Fitzmaurice, C. (2015). Collaborating and connecting: The emergence of the sharing economy. In: Handbook on research on sustainable consumption, eds. L. Reisch and J. Thøgersen. Cheltenham, UK: Edward Elgar.

⁹ Botsman, R. and Rogers, R. (2010). *What's Mine is Yours: The Rise of Collaborative Consumption*, New York, NY, Harper Collins Publishers.

¹⁰ Stokes, K., Clarence, E., Anderson, L., Rinne, A. (2014). *Making Sense of the UK Collaborative Economy*. NESTA. Available at: http://www.nesta.org.uk/sites/default/files/making_sense_of_the_uk_collaborative_economy_14.pdf

¹¹ Bardhi, F., Eckhardt, G. (2012). *Access based consumption: the case of car sharing*. Journal of Consumer Research, 39: 881-898.

¹² Rifkin, J. (2001). *Age of Access: The New Culture of Hypercapitalism, Where All of Life is a Paid-for Experience*, Tarcher/Putnam; New York.

¹³ CB Insights (2015). *An Overview of The On-Demand Landscape: Rise of the On-Demand Economy*. Available from

<https://www.cbinsights.com/on-demand-overview>

¹⁴ Gansky, L. (2010) *The Mesh: Why the Future of Business is Sharing*. New York: Portfolio Penguin.

¹⁵ Cadman, E. (2015). Employers tap 'gig' economy in search of freelancers, The Financial Times. Available from

<http://www.ft.com/cms/s/0/ee293af0-5ab7-11e5-9846-de406ccb37f2.html#axzz3IZ2w2ykU>

2.1 P2P markets from a consumer policy perspective

The aim of EU consumer policy is to maximise consumer participation and trust in the market. Consumer policy generally governs Business to Consumers (B2C) interactions, and it perceives the consumer as the weaker party in such transactions.^{16,17} A well-designed and implemented consumer policy can lead to improved transparency and better informed choices, which result in better solutions for consumers and greater market efficiency.¹⁸

With the emergence of the internet, EU-level consumer protection has focused among other aspects, on facilitating online purchases. 95% of EU consumers made at least one purchase online in the past 12 months, while 12% of EU consumers make such purchases at least every month¹⁹. At this stage, the EU-level focus has shifted towards harmonising consumer rights across Member States, facilitating cross-border and online purchasing and promoting best practices.²⁰

From a consumer and consumer policy perspective, online P2P transactions via platforms offer both benefits and challenges. Benefits for consumers include efficient use of under-utilised resources, improved access to certain goods or lower prices. At the same time, online P2P platforms also pose challenges for consumers: it is not always clear who (the platform or the other peer or both parties) is responsible when something goes wrong and how to obtain redress.

Policy makers need to clarify the applicability and enforcement of existing consumer protection rules which were designed for offline B2C transactions. Regulatory uncertainty brought by the rapid development of online P2P markets can create risks and potential detriment for consumers acting as peers, as well as hinder the sustainable development of these markets.

The OECD (2016) finds that in peer platform markets, consumers have a role not only as peer consumers, but also as peer producers/providers and peer reviewers. This is in line with academic authors like Cohen and Sundararajan²¹ (2015) or Fraiberger and Sundararajan²² (2015) who define P2P transactions as digitally enabled market-based trade between individuals acting as both sellers (providers) and buyers (consumers) of goods/services like transportation, logistics, accommodation or personal services. These transactions take place without the

¹⁶ Koopman, C., Mitchell, M., Thierer, A. (2015). The Sharing Economy and Consumer Protection Regulation: The Case for Policy Change. *The Journal of Business, Entrepreneurship & the Law*, 8(2). Available at: <https://www.mercatus.org/system/files/Koopman-Sharing-Economy.pdf>

¹⁷ United Nations Conference on Trade and Development (2016). United Nations Guidelines for Consumer Protection. Available at: http://unctad.org/en/PublicationsLibrary/ditccplpmisc2016d1_en.pdf

¹⁸ European Parliament (2014). Study on Consumer protection aspects of financial services. Available at:

[http://www.europarl.europa.eu/RegData/etudes/etudes/etudes/join/2014/507463/IPOL-IMCO_ET\(2014\)507463_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/etudes/join/2014/507463/IPOL-IMCO_ET(2014)507463_EN.pdf)

¹⁹ European Commission (2015). Provision of two online consumer surveys as support and evidence base to a Commission study: Identifying the main cross border obstacles to the Digital Single Market and where they matter most. Available at:

http://ec.europa.eu/consumers/consumer_evidence/market_studies/obstacles_dsm/docs/21.09_dsm_final_report.pdf

²⁰ European Commission (2012). Staff Working Document Consumer Empowerment in the EU, p. 10. Available at:

http://ec.europa.eu/consumers/archive/strategy/docs/swd_document_2012_en.pdf

²¹ Cohen, M. and Sundararajan, A. (2015). Self-regulation and Innovation in the peer-to-peer sharing economy. Available from https://www.heartland.org/sites/default/files/sundararajan_cohen_dialogue.pdf.

²² Fraiberger, S. and Sundararajan, A. (2015). Peer-to-peer markets in the sharing economy. Available at: http://www.netinst.org/Fraiberger_Sundararajan_15-19.pdf

involvement of conventional traders or retailers, but they are facilitated through online P2P marketplaces. (NESTA, 2014²³; House of Lords, 2016²⁴)

This makes transactions in online P2P markets fundamentally different from traditional offline B2C transactions:

- Consumers have a far more active role in the transaction than in traditional markets, at times also acting as providers, and often as reviewers;
- Consumers acting as providers can reach a larger group of potential consumers;
- P2P platforms act as intermediaries and do not take responsibility for the transactions conducted between peers;
- Data on peer behaviour can be used by P2P platforms, which may pose issues related to privacy, reputation and switching costs.²⁵ (see details in sub-section 4.4)

Some consumer issues that arise on online P2P platforms could potentially be solved through self-regulatory approaches by the P2P platforms and greater transparency about rights, obligations and responsibilities. A study by PwC (2015)²⁶ finds that 64% of peers consider "peer regulation" more important than government regulation.

However, while self-regulatory approaches may be useful, they might not be sufficient because they are voluntary and not enforced systematically, but mainly through incentives rather than sanctions²⁷. A 2016 report from the US Federal Trade Commission (FTC) (2016) suggests that self-regulatory measures alone might not be enough to address the externalities deriving from the platforms' operation, "since addressing such impacts may not directly promote transacting on the platform"²⁸.

Thus, despite the existence of self-regulatory mechanisms, the traditional objectives of consumer policy remain relevant for regulating online P2P platforms. This is confirmed by an OECD (2016) study which finds that elements such as easy access to information, safe payment options, fair Terms and Conditions or effective dispute resolution mechanisms are important for peers²⁹. According to the FTC such elements cannot be addressed through self-regulation: platforms "may have little monetary incentive to address issues that impose costs only on third parties" but

²³ Stokes, K., Clarence, E., Anderson, L., Rinne, A. (2014). Making Sense of the UK Collaborative Economy. NESTA. Available at: http://www.nesta.org.uk/sites/default/files/making_sense_of_the_uk_collaborative_economy_14.pdf

²⁴ House of Lords EU Internal Market Subcommittee (2016). Online Platforms and the Digital Market Oral and Written Evidence OPL0061. Available at: <http://www.publications.parliament.uk/pa/ld201516/ldselect/lddeucom/129/129.pdf>

²⁵ OECD (2016). Protecting Consumers in Peer Platform Markets: Exploring the issues. OECD Digital Economy Papers (253).

²⁶ PwC (2015). *The Sharing Economy*. Consumer Intelligence Series. Available at: <http://www.pwc.com/us/en/industry/entertainment-media/publications/consumer-intelligenceseries/assets/pwc-cis-sharing-economy.pdf>

²⁷ E.g. through additional benefits to peers that comply, such as AirBnB's super host badge, or Peerby's green verification circle – see Task 4 case studies.

²⁸ US Federal Trade Commission (2016). The "Sharing Economy". Issues Facing Platforms, Participants & Regulators. An FTC Staff Report. Available at: https://www.ftc.gov/system/files/documents/reports/sharing-economy-issues-facing-platforms-participants-regulators-federal-trade-commission-staff/p151200_ftc_staff_report_on_the_sharing_economy.pdf

²⁹ OECD (2016). Protecting Consumers in Peer Platform Markets: Exploring the issues. OECD Digital Economy Papers (253).

both the platform and peer providers “may have an interest in addressing such harms if they could be liable to third parties for such harms”³⁰.

2.2 Types of P2P transactions facilitated by online platforms

From a consumer policy perspective, distinguishing between monetary and non-monetary P2P transactions is important to identify the type of relationship between the two peers involved.

Broadly, as suggested by Scholl et al (2015)³¹, P2P transactions can be categorised depending on:

- Whether they are monetary (e.g. renting) or non-monetary (e.g. sharing),
- Whether they involve the transfer of property or not, and
- Whether the transaction is sequential (e.g. whether a good/service is used/consumed by peers at different points in time) or simultaneous (e.g. whether the good/service is used/consumed by peers simultaneously).

Scholl et al’s (2015) categorisation as shown in Table 1, can be applied to different transaction types, and broadly captures the categorisation of transactions used in academic literature as a whole.

Table 1: Types of peer to peer sharing

Transaction type	Transfer of ownership	Type of remuneration	Use mode
Gift	✓	None	Sequential
Swap	✓	Non-monetary	Sequential
Resale	✓	Monetary	Sequential
Co-use		Monetary or non-monetary	Simultaneous
Lend		Non-monetary	Sequential
Rent out		Monetary	Sequential

Source: Scholl, G., Behrendt, S., Flick, C., Gossen, M., Henseling, C., Richter, L. (2015). Peer-to-peer Sharing, Definition und Bestandsaufnahme. PeerSharing Arbeitsbericht 1. Available at: http://www.peer-sharing.de/data/peersharing/user_upload/Dateien/PeerSharing_Ergebnispapier.pdf

First, considering their **monetary vs non-monetary** aspect, this study only considers for-profit platforms, as indicated in sub-section 2.4. However, non-monetary transactions are very common, both among the platforms selected in this study (see sub-section 4.1.1), as well as in the literature. Indeed, non-monetary transactions that involve any form of compensation for the platform, for instance in the sharing of peer user data which can then be re-used or sold to third parties, are included in the scope of this study.

³⁰ US Federal Trade Commission (2016). The “Sharing Economy”. Issues Facing Platforms, Participants & Regulators. An FTC Staff Report. Available at: https://www.ftc.gov/system/files/documents/reports/sharing-economy-issues-facing-platforms-participants-regulators-federal-trade-commission-staff/p151200_ftc_staff_report_on_the_sharing_economy.pdf

³¹ Scholl, G., Behrendt, S., Flick, C., Gossen, M., Henseling, C., Richter, L. (2015). Peer-to-peer Sharing, Definition und Bestandsaufnahme. PeerSharing Arbeitsbericht 1. Available at: http://www.peer-sharing.de/data/peersharing/user_upload/Dateien/PeerSharing_Ergebnispapier.pdf

Second, in terms of **ownership transfer**, Scholl et al (2015) refer to P2P transactions as a “*shared usage of a good or service between two private individuals that is facilitated by a third party*”. According to them, P2P transactions can include transfer of ownership (thus extending the use-life of the good/service) through swapping or reselling, or not (thus intensifying the usage of the good/service), such as for lending or renting activities.

Online P2P marketplaces that involve the transfer of ownership can include both monetary and non-monetary P2P transactions. Monetary transactions are generally covered in the (re)sale of goods market, where peers buy or (re)sell (second-hand) goods from each other. The (re)sale market is vast, as seen in this study’s platform selection (see sub-section 4.1.1) or its economic estimations in sub-section 0. However, many studies such as PwC (2015)³² or ING (2015)³³ do not include the (re)sale market among their definition of “*sharing economy*” or P2P marketplaces.

For online P2P marketplaces that do not involve the transfer of ownership³⁴, the academic literature^{35,36,37} distinguishes between two types of P2P transactions:

- Temporary access to physical assets, e.g. accommodation (Wimdu, 9Flats), cars (SnappCar, EasyCarClub), tools (DeDeelKelder)³⁸, or
- Access to manual and knowledge intensive services (e.g. Taskrabbit).

Finally, in terms of the **sequential vs simultaneous** distinction made by Scholl et al (2015), most types of P2P transactions are sequential. Examples of simultaneous P2P transactions include ride-sharing (e.g. BlaBlaCar, EasyCarClub) or certain monetary or non-monetary types of accommodation sharing (e.g. CouchSurfing).

2.3 Main actors and relationships in P2P markets

The concept of peer to peer transactions is not new. As Schor and Fitzmaurice (2015) point out³⁹, P2P interactions evolved from isolated marketplaces to digitally-enabled markets through P2P platforms. According to Salminen (2004), before online platforms, P2P exchanges took place informally, in isolated marketplaces as shown in Figure 1 (e.g. informally hiring a babysitter; using a self-employed hairdresser)⁴⁰. In these isolated marketplaces, matches and transactions were not mediated or facilitated by any third-party players. They were not enabled and controlled by digital technologies or algorithms either. They were random, ad hoc, highly dependent on a time, a physical place and a situation, and, therefore,

³² PwC (2015). *The Sharing Economy*. Consumer Intelligence Series. Available at: <http://www.pwc.com/us/en/industry/entertainment-media/publications/consumer-intelligenceseries/assets/pwc-cis-sharing-economy.pdf>

³³ ING International Survey (2015), WHAT’S MINE IS YOURS – FOR A PRICE. RAPID GROWTH TIPPED FOR THE SHARING ECONOMY.

³⁴ The “collaborative economy” according to the European Commission’s definition; the “sharing economy” according to Frenken, Meelen, Arets and van de Griend (2015) ; « P2P markets » according to Derojeda et al (2013)

³⁵ Andersson, M., Hjalmarsson, A., Avital, M. (2013). P2P Service Sharing Platforms: Driving Share and Share Alike on a Mass-Scale. Completed Research Paper. Thirty Fourth International Conference on Information Systems, Milan 2013.

³⁶ Botsman, Rachel; Rogers, Roo (2011): What’s mine is yours: how collaborative consumption is changing the way we live. Collins. London.

³⁷ Schor, J., Fitzmaurice, C. (2015). Collaborating and Connecting: The Emergence of a Sharing Economy. In: Reisch, Lucia; Thøgersen, John (Hrsg.): Handbook on Research on Sustainable Consumption. Cheltenham, UK: Edward Elgar, 410–425.

³⁸ These activities can be seen as services but they are neither manual nor knowledge intensive but based on making available an asset for more intensive use.

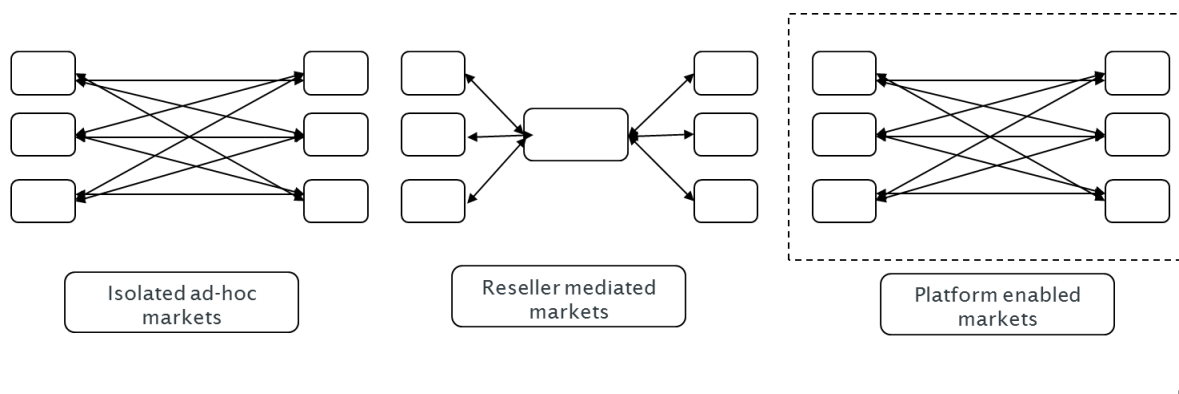
³⁹ Schor, J. and Fitzmaurice, C. (2015). Collaborating and connecting: The emergence of the sharing economy. In: Handbook on research on sustainable consumption, eds. L. Reisch and J. Thøgersen. Cheltenham, UK: Edward Elgar.

⁴⁰ Salminen, J. (2014). Startup dilemmas - strategic problems of early-stage platforms on the Internet. Publications of Turku School of Economics, Series A. Turku, Juvenes Print.

associated with high information asymmetries, and high information search and transaction costs.

The novelty of "peer platform markets" is that the commercial exchange of goods and services takes place through online P2P platforms⁴¹ which act as an intermediary between peer providers and peer consumers and facilitate the transaction in various ways⁴² (see also sub-section 4.2). The main benefit that these platforms bring to peer to peer exchanges is that they help to substantially reduce transaction and coordination costs⁴³. The cost-reduction is evident in the platform's service of matching supply and demand, as illustrated in Figure 1 adapted from Salminen (2014):

Figure 1: Evolution of peer to peer marketplaces



Source: Adapted from Salminen (2014)⁴⁴

In platform-enabled markets, there are thus three main actors involved⁴⁵:

- The **online platform** which at its most basic acts as a "matchmaker" bringing together demand for and supply of a good or service to be exchanged or shared, while potentially supplying peers with add-on services such as insurance, chat function, review systems, background checks and so forth;
- **One "peer" acting as the provider** of the good or service to be shared or exchanged (peer provider); and
- **One "peer" acting as the consumer / purchaser** of the good or service to be shared or exchanged (peer consumer).

The three types of actors form a closed relationship governed by external and internal rule-making procedures. Such rules can, for instance, give consumers access to redress mechanisms which serve to protect them. Figure 2, adapted from the OECD (2016) illustrates the interaction between platforms and their peers, and

⁴¹ OECD (2016). Protecting Consumers in Peer Platform Markets: Exploring the issues. OECD Digital Economy Papers (253).

⁴² Martens, B. (2016). An Economic Policy Perspective on Online Platforms. Digital Economy Working Paper 2016/05. JRC Technical Reports.

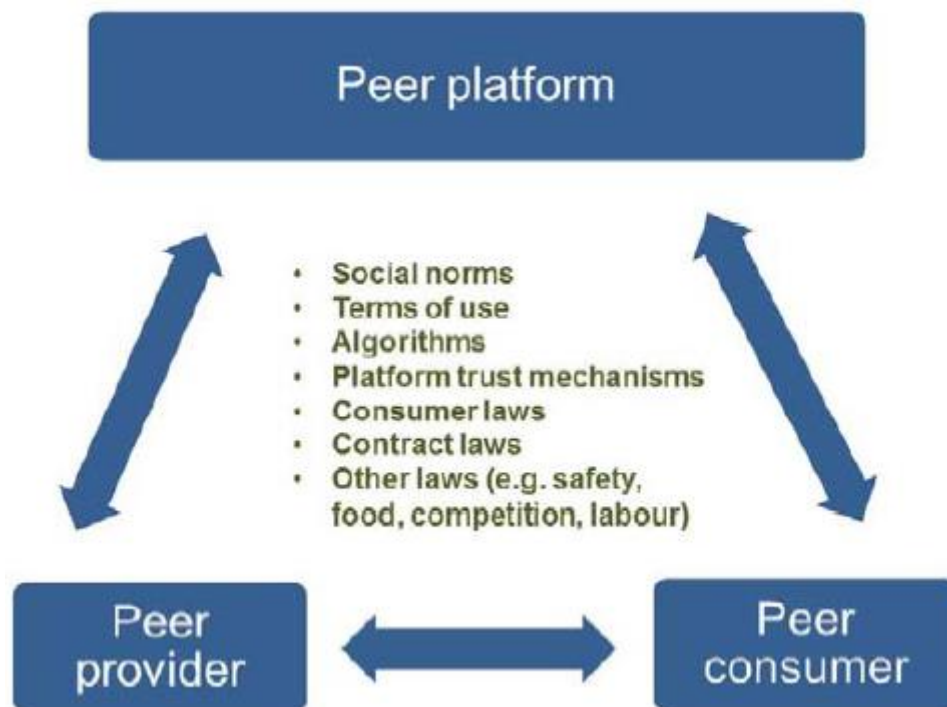
⁴³ Hagiu, A., Wright, J. (2013), Do you really want to be an eBay. Harvard Business Review, 91 (3): 102–108.

⁴⁴ Salminen, J. (2014). Startup dilemmas - strategic problems of early-stage platforms on the Internet. Publications of Turku School of Economics, Series A. Turku, Juvenes Print.

⁴⁵ OECD (2016). Protecting Consumers in Peer Platform Markets: Exploring the issues. OECD Digital Economy Papers (253).

indicates what type of external or self-regulatory measures exist to protect consumers.

Figure 2 : Different layers of rule-making on online P2P platforms



Source: OECD (2016). *Protecting Consumers in Peer Platform Markets: Exploring the issues*. OECD Digital Economy Papers (253).

At any point in time, a given peer consumer can be considered as a recipient of services/goods provided by both a peer provider and a P2P platform. Similarly, a peer provider is - in addition to his role as provider - also a recipient of services provided by the P2P online platform.

The next three sub-sections discuss each of the main actors in an online P2P transaction in greater detail. These findings serve as a starting point for identification of, for instance, the recipients of the services offered by P2P platforms (sub-section 4.2).

2.3.1 Peer consumers

Peer consumers are **recipients of goods/services provided by peer providers, as well as the platform**. The OECD (2016) defines peer consumers as those purchasing, acquiring or renting goods and services from peer providers. Peer consumers, according to the European Commission (2016) engage in P2P transactions on online platforms because they can access more and cheaper services. According to The Economist⁴⁶ and to researchers such as Hansen and

⁴⁶ The Economist (2013). All eyes on the Sharing Economy. Available at: <http://www.economist.com/news/technology-quarterly/21572914-collaborative-consumption-technology-makes-it-easier-people-rent-items>

Windekilde (2016)⁴⁷, more peer consumers engaged in P2P transactions following the 2008 financial crisis, partly as a result of financial pressure.

A study by GfK (forthcoming)⁴⁸, focussing on peer users in general, maps **seven peer types**. This typology is based on a survey in 10 EU countries in which participants were asked to respond to certain value statements. The resulting scale of interests in collaborative platforms ranges from “achievers” to “traditionalists” as illustrated in Figure 3.

Figure 3: Typology of peers using collaborative platforms



Source: GfK (forthcoming). Consumer Life survey. Insights on the sharing economy

A 2016 Eurobarometer on the use of collaborative platforms reports that **more than half of respondents (52%) have heard of collaborative platforms**, and 17% have used them. Young and highly educated respondents who live in urban areas and who are self-employed or employees are more likely to be aware of collaborative platforms (62%) and to have used them at least once (32%). Over a third of the respondents who have visited collaborative platforms have provided services on these platforms (32%), but only 5% offer such services regularly.⁴⁹ These results indicate that there is a growing trend for platform use, especially among young people, and it can lead to sector growth.

2.3.2 Peer providers

A peer provider is **a platform user who creates supply of goods and services on the platform**. The OECD (2016)⁵⁰ defines peer providers as “individuals

⁴⁷ Henten, Anders Hansen, and Iwona Maria Windekilde. “Transaction costs and the sharing economy.” info 18.1 (2016): p. 4

⁴⁸ GfK (forthcoming). Consumer Life survey. Insights on the sharing economy.

⁴⁹ Flash Eurobarometer 438 (March 2016), “The use of collaborative platforms”, pp. 3-4. This survey was carried out in the 28 EU Member States between the 15th and the 16th March 2016. Some 14,500 respondents from different social and demographic groups were interviewed via telephone (landline and mobile phone) in their mother tongue. In the EU, collaborative platforms are defined as “internet-based tools that enable transactions between people providing and using a service”, p. 2.

⁵⁰ OECD (2016). Protecting Consumers in Peer Platform Markets: Exploring the issues. OECD Digital Economy Papers (253).

supplying the goods or services” in P2P transactions. The European Commission (2016)⁵¹ states that peer providers qualify as “traders” if they act “for purposes relating to their trade, business, craft or profession”. This study is primarily concerned with peers acting in a private capacity on P2P platforms, but it acknowledges that peer providers may be acting in a professional or private capacity.⁵²

Indeed, the **status of peer providers is subject of unclarity and controversy with respect to tax rules, market access rules, employment relations as well as consumer law.** For example, as regards employment relationships, on one side peer providers may be classified as self-employed or sole traders, who may not always need to be formally registered due to the limited scale and ad-hoc nature of trade involved⁵³. At the same time, several lawsuits brought by peer providers themselves (e.g. against Instacart⁵⁴, Uber⁵⁵), contend that peer providers are effectively employees of P2P platforms. De Groen and Masselli (2016), when looking at the impact of P2P platforms on the EU labour market, find that some platforms allow peer providers to decide whether/when to offer their time/services/goods without imposing minimum criteria to prevent their link with the peer provider from being interpreted as an employment relationship⁵⁶.

From a consumer policy perspective, the status of peer providers is important: peer providers who act in a private capacity are not “traders” and therefore not subject to current consumer law which applies only to B2C transactions.

To help determine who classifies as a “trader” for tax purposes, certain Member States, such as the Netherlands or Denmark, impose earning thresholds: in The Netherlands peer providers earning over EUR 6,000 need to register as self-employed and pay taxes⁵⁷. The threshold is set at about EUR 6,700 in Denmark⁵⁸ (see Task 5 report for a detailed overview of such earning thresholds).

According to research by Balaram (2016)⁵⁹ or Farrell and Greig (2016)⁶⁰, peer providers **mostly use P2P platforms as a secondary source of income:** in Farrell and Greig’s (2016) study, platform earnings for peer providers in the US odd jobs P2P market amount to about 33% of their total earnings. Balaram (2016) argues that the number of sharing economy users is predicted to grow as a result of satisfaction rates of users. Citing US-based sources, Balaram highlights that 600,000 people, or 0.6% of the total employed in the US provide services through collaborative economy platforms, while some US political actors argue that the number is at least 3 million. Balaram also argues, however, that due to statistical

⁵² This aspect is thoroughly discussed in Task 5 report.

⁵² This aspect is thoroughly discussed in Task 5 report.

⁵³ Gov.UK (2015). Working for yourself. Available at: <https://www.gov.uk/working-for-yourself/what-counts-as-self-employed>

⁵⁴ Steinmetz, K. (2015). Lawsuit claims Instacart ‘personal shoppers’ should be classified as employees. Fortune. Available at: <http://fortune.com/2015/03/18/lawsuit-claims-instacart-personal-shoppers-should-be-classified-as-employees/>

⁵⁵ Shontell, A. (2015). California Labor Commission rules an Uber driver is an employee, which could clobber the \$50 billion company. Available at: <http://uk.businessinsider.com/california-labor-commission-rules-uber-drivers-are-employees-2015-6?r=US>

⁵⁶ De Groen, W. P., Maselli, I. (2016). The impact of the Collaborative Economy on the Labour Market.

⁵⁷ Deloitte (2014). Geld verdienen in de deeleconomie? De fiscus kijkt mee. Available at: <https://deloitte.ctrl.nl/nl/actual/Geld-verdienen-in-de-deeleconomie--De-fiscus-kijkt.aspx>

⁵⁸ Meploy. Available at: https://meploy.me/help_taxes

⁵⁹ Balaram, B. (2016). Fair Share: Reclaiming power in the Sharing Economy. Available at: <https://medium.com/rsa-reports/fair-share-reclaiming-power-in-the-sharing-economy-499b46bd4b00#.qey2m52k5>

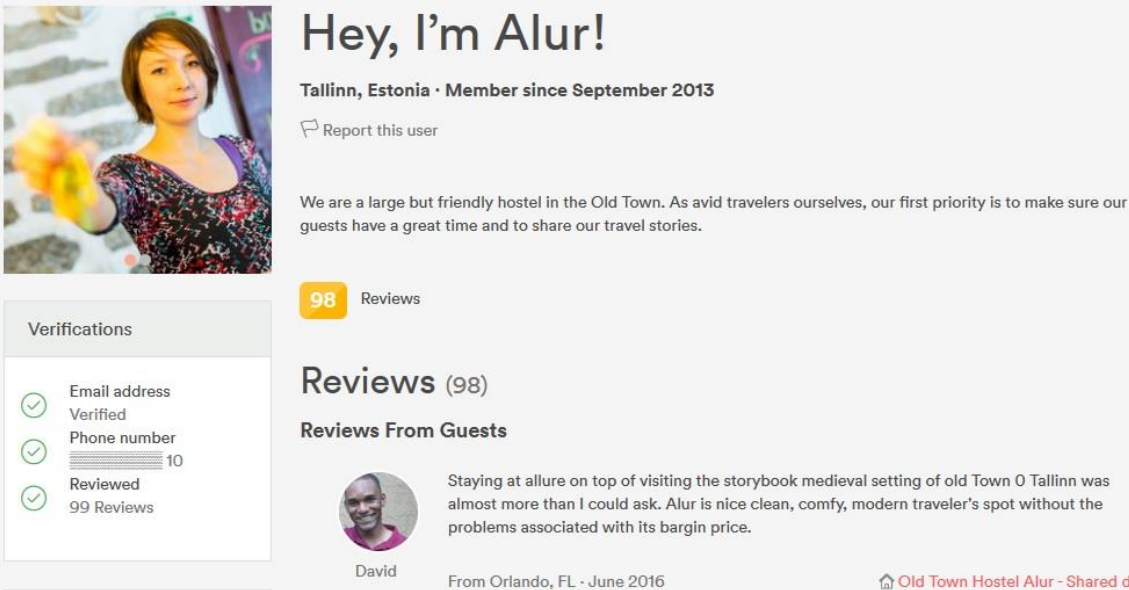
⁶⁰ Farrell, D., Greig, F. (2016). Paychecks, Paydays, and the Online Platform Economy. Big Data on Income Volatility, JP Morgan & Chase Institute.

classification standards, it is difficult to identify on-platform workers from the broader self-employed population.

NESTA (2016) finds that there is a growing trend among micro-entrepreneurs to engage on collaborative platforms: in the UK, the number of businesses with no employees and operating under the VAT registration turnover threshold of around EUR 93,000 has nearly doubled between 2000 and 2016 to 2.7 million. Additionally, the number of people who declare themselves as self-employed is the highest it has ever been, with 15% of the UK workforce, or 4.6 million people. Finally, NESTA forecasts that the rate of self-employed will increase in next decade, with one in four in the labour force outside the “employees” category.⁶¹

Certain platforms explicitly allow **professional service providers** on their platforms, who would qualify as “traders”⁶² under the European Commission’s definition indicated above. This is especially the case in the (re)sale market (e.g. eBay, MarktPlaats or LeBonCoin). Accommodation sharing platforms like AirBnB also allow professional traders to advertise their services on the platform, and leave it up to the provider to voluntarily identify themselves as such, as indicated in Figure 4. Transportation sharing platforms like Taxify in Estonia allow drivers operating in their private capacity as well as those representing professional cab operators to list their services on the platform. Other platforms like BlaBlaCar in the ride-sharing market actively discourage and exclude such practices using, for instance, price caps (see also the Task 4 case study reports)

Figure 4: Instance of business operating using a P2P platform (AirBnB)



Hey, I'm Alur!
Tallinn, Estonia · Member since September 2013
Report this user

We are a large but friendly hostel in the Old Town. As avid travelers ourselves, our first priority is to make sure our guests have a great time and to share our travel stories.

98 Reviews

Reviews (98)
Reviews From Guests

Staying at allure on top of visiting the storybook medieval setting of old Town 0 Tallinn was almost more than I could ask. Alur is nice clean, comfy, modern traveler's spot without the problems associated with its bargain price.

David
From Orlando, FL · June 2016

Old Town Hostel Alur - Shared dk

Source: AirBnB website

⁶¹ NESTA (2016). Rise of the micro-entrepreneur. Available at: <http://www.nesta.org.uk/news/collaborative-economy-2025/rise-micro-entrepreneur>

⁶² In the EU consumer law acquis, a 'trader' means any natural or legal person who is acting for purposes relating to his trade, craft, business or profession and anyone acting in the name of or on behalf of a trader;

For businesses and SMEs, P2P platforms are often more than just another channel for selling their services/goods. News outlets such as GSO (2016)⁶³ or Curatti⁶⁴ refer to the “**uberisation**” of traditional models of business to explain the rise in platform-facilitated transactions. For them, uberisation allows SMEs and self-employed professionals to find clients without involving middlemen such as retailers, traditional companies, advertising firms or recruiters. Defined as such, there are indications that uberisation is becoming increasingly prevalent in the labour market, outcompeting traditional businesses^{65,66,67,68,69} such as house repairs companies or the fact that on eBay, 80% of the company’s gross added-value comes from B2C transactions⁷⁰.

2.3.3 P2P platforms

P2P platforms are “**internet businesses providing the platforms to facilitate, organise and mediate the interactions between peer providers and peer consumers**” according to the OECD (2016)⁷¹. Goudin (2016)⁷², Balaram (2016)⁷³ as well as the case studies under Task 4 of this report find that P2P platforms are usually registered legal entities and the European Commission (2016)⁷⁴ classifies P2P platforms as “traders” if they engage in commercial practices vis-à-vis consumers.

The purpose of P2P platforms, as described earlier in sub-section 3.3, is to facilitate transactions between peer providers and peer consumers. Through their services, P2P platforms can facilitate transactions which were otherwise very fragmented and often economically unsustainable due to their very local scale, ad hoc nature and high transaction costs. Hamari, Sjoklint and Ukkonen (2015) find that digital platforms substantively reduce geographical and situational constraints, making them a viable, affordable and convenient alternative to conventional services⁷⁵. Their view is shared by Hagiu and Wright (2013)⁷⁶, who find that digital platforms reduce transaction costs between isolated sellers and buyers.

⁶³ GSO (2016). Taking uberization to the Field - Disruption is coming for Field Marketing. Available at:

<http://www.cso.com.au/mediareleases/27033/taking-uberization-to-the-field-disruption-is/>

⁶⁴ Morin, R. (2014). Uberisation and the New Economy. Available at: <http://curatti.com/uberisation-and-the-new-challenges-for-organizations/>

⁶⁵ Le Moniteur (2016). Les artisans face au choc de l’uberisation. Available at : <http://www.lemoniteur.fr/articles/les-artistes-face-au-choc-de-l-uberisation-32155486>

⁶⁶ Chamorro-Premuzic, T. (2014). The Uberisation of Talent: Can the job market really be optimised?. Forbes. Available at: <http://www.forbes.com/sites/tomaspremuzic/2014/03/21/the-uberisation-of-talent-can-the-job-market-really-be-optimised/#4d7b333f2e60>

⁶⁷ Marie-Claire Carrère-Gée. (2015). L’Ubérisation de l’emploi est déjà partout !. Le Monde. Available at : http://www.lemonde.fr/emploi/article/2015/11/05/l-uberisation-de-l-emploi-est-deja-partout_4803410_1698637.html#HM2fYAvmItDC7J57.99

⁶⁸ Valenduc, G., & Vendramin, P. (2016). Work in the digital economy: sorting the old from the new. ETUC Working Paper. Available at : https://dial.uclouvain.be/pr/boreal/object/boreal%3A173373/datastream/PDF_01/view

⁶⁹ Euractiv (2015). The ‘uberisation’ of the workplace is a new revolution. Available at: <https://www.euractiv.com/section/social-europe-jobs/opinion/the-uberisation-of-the-workplace-is-a-new-revolution/>

⁷⁰ This aspect is further explored in the eBay case study part of Task 4.

⁷¹ OECD (2016). Protecting Consumers in Peer Platform Markets: Exploring the issues. OECD Digital Economy Papers (253).

⁷² Goudin, P. (2016). The Cost of the Non-Sharing Economy: Economic, Social and Legal Challenges and Opportunities, European Parliament PE559.777 (2016), p.9.

⁷³ Balaram, B. (2016). Fair Share: Reclaiming power in the Sharing Economy. Available at: <https://medium.com/rsa-reports/fair-share-reclaiming-power-in-the-sharing-economy-499b46bd4b00#.qey2m52k5>

⁷⁴ European Commission (2016). A European agenda for the collaborative economy, COM (2016) 356 final

⁷⁵ Hamari, J., Sjoklint, M., Ukkonen, A. (2015). The sharing economy: why people participate in collaborative consumption. Journal of the Association for Information Science and Technology, DOI: 10.1002/asi.23552.

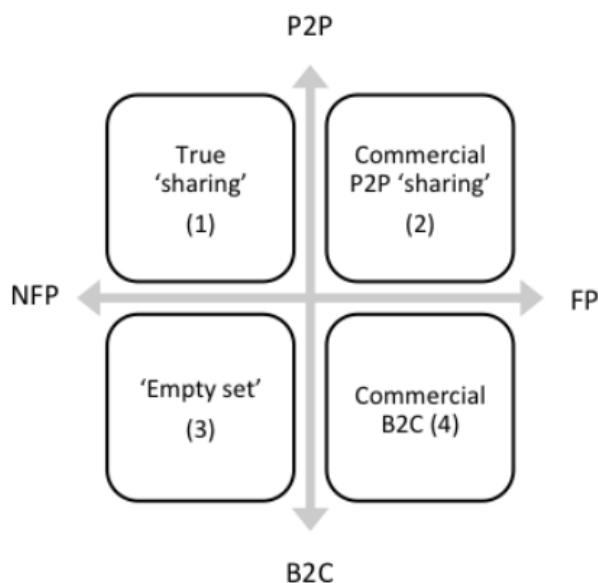
⁷⁶ Hagiu, A., Wright, J. (2013). Do you really want to be an eBay. Harvard Business Review, 91 (3): 102–108.

Platforms can make use of digital algorithms based, for instance, on location, price or time to facilitate transactions. This mechanism of matching demand and supply is evidenced by Shih (2011)⁷⁷, Balaram (2016)⁷⁸ or Schor and Fitzmaurice (2015)⁷⁹ as well as by the empirical research of this study in section 4. Schor (2015)⁸⁰ claims that demand and supply matching systems make the P2P economy potentially highly scalable and more commercially viable than before.

Through their matching services, P2P platforms are able to take advantage of network effects. Wayne, Teo and Seng (2012)⁸¹ describe network effects as the fact that the more peers are active on a platform, the more additional peers they draw in. A higher number of peers on a platform increases the probability of interactions and subsequent transactions between them. Put differently, the network effects on online P2P platforms mean that peer consumer benefit from using the platform is directly linked to the number of other peers who use the same service.

In the academic literature, there are several types of classification systems for P2P marketplaces. One system, developed by Codagnone and Martens (2016)⁸² distinguishes four categories of platforms depending on the nature of the transactions they facilitate and whether they are commercially-driven or not. The typologies are illustrated below:

Figure 5: Mapping of P2P platforms



⁷⁷ Shih, W. (2011) Scale effects, network effects, and investment strategy. HBS No. 9-611-082. Harvard Business School Publishing.

⁷⁸ Balaram, B. (2016). Fair Share: Reclaiming power in the Sharing Economy. Available at: <https://medium.com/rsa-reports/fair-share-reclaiming-power-in-the-sharing-economy-499b46bd4b00#.qey2m52k5>

⁷⁹ Schor, J. and Fitzmaurice, C. (2015). Collaborating and connecting: The emergence of the sharing economy. In: Handbook on research on sustainable consumption, eds. L. Reisch and J. Thøgersen. Cheltenham, UK: Edward Elgar.

⁸⁰ Schor, J. (2015). Getting sharing right. *Contexts*, 14 (1): 14-15.

⁸¹ Wayne Fu, W., Teo, J., Seng, S. (2012). The bandwagon effect of participation in and use of a social networking site. *First Monday*, 17(5). Retrieval at: <http://firstmonday.org/ojs/index.php/fm/article/view/3971/3207>

⁸² Codagnone, C., Martens, B. (2016). Scoping the Sharing Economy: Origins, Definitions, Impact and Regulatory Issues. Institute for Prospective Technological Studies Digital Economy Working Paper 2016/01, JRC100369. Available at SSRN: <https://ssrn.com/abstract=2783662>

Source: Codagnone and Martens (2016)

In Figure 5 above, P2P platforms are arranged on a bi-dimensional matrix ranging from not-for-profit (NFP) to for-profit (FP) on the horizontal axis and P2P to B2C on the vertical axis. The authors rate not-for-profit P2P transactions as “true sharing”, while for-profit P2P transactions are “commercial P2P sharing”. For-profit B2C transactions are classified as “commercial B2C”, while quadrant 3 (not for profit B2C transactions) are an empty set because “businesses are by definition for-profit, though they may finance some social and philanthropic activities.”⁸³ This study focuses on the P2P side of Codagnone and Martens’ (2016) typology. However, a number of platforms facilitate both commercial P2P and B2C sharing and – due to the significant consumer policy interest in the distinction between these different types - these platforms are also included in the study.

Apart from the Codagnone and Martens approach described above, there is a wide range of other classifications of P2P platforms. For instance, Frenken, Meeulen, Arets and van de Glind (2015)⁸⁴ distinguish between platforms facilitating access to physical assets, and platforms allowing peers to access intangible assets (e.g. manual and knowledge-intensive-skills like Kang.fr). Bardhi and Eckhardt (2012) include so-called “product service platforms” like Zipcar as they are aimed at extending the use and lifecycle of goods and materials⁸⁵.

In addition to different typologies of online P2P platforms, researchers like Goudin (2016)⁸⁶ also report uncertainty regarding their classification into economic sectors. From a consumer protection perspective, uncertainty in industrial classification may lead to uncertainty about the platforms’ obligations before consumers. This is because certain industrial sectors fall within certain EU and national-level regulations. The box below, illustrates that classifying P2P platforms into traditional industrial sectors can be difficult.

⁸³ Codagnone, C., Martens, B. (2016). Scoping the Sharing Economy: Origins, Definitions, Impact and Regulatory Issues. Institute for Prospective Technological Studies Digital Economy Working Paper 2016/01, JRC100369. Available at SSRN: <https://ssrn.com/abstract=2783662>

⁸⁴ Balaram, B. (2016). Fair Share: Reclaiming power in the Sharing Economy. Available at: <https://medium.com/rsa-reports/fair-share-reclaiming-power-in-the-sharing-economy-499b46bd4b00#.qey2m52k5>

⁸⁵ Bardhi, F., Eckhardt, G. (2012). *Access based consumption: the case of car sharing*. Journal of Consumer Research, 39: 881-898.

⁸⁶ Goudin, P. (2016). The Cost of the Non-Sharing Economy: Economic, Social and Legal Challenges and Opportunities, European Parliament PE559.777 (2016), p.9.

Box 2: Statistical uncertainty in industrial classification

Statistical datasets where P2P platforms are listed, such as the Orbis database of Bureau van Dijk, classify similar platforms with different NACE Rev 2 codes. This is due to several limitations:

The main problem is that platforms are often owned by a legal entity owning other businesses as well. The Hut Group Limited owns both TheHut.com – a B2C retail website – and PreLoved.com – a free classifieds website. In Poland, Oferia.pl, a personal services platform allowing peers to find gardeners, translators and the like is owned by LeroyMerlin, the French giant retailer for gardening and home improvement products. In Romania, Antena TV Group, a large TV broadcasting service provider, owns platforms like LaJumate.ro, a car-sharing service.

Even in cases where the legal entity has no other subsidiary, and even though the platforms are almost identical in what they offer, they might still be interpreted as belonging to different industrial sectors. For instance, all the (re)sale platforms indicated below are the sole activity of their legal entity (i.e. no other subsidiary), all provide a platform with items for sale combined with job search, automobile and real estate sales/renting, and yet they are classified differently. Moreover, GumTree and 2deHands are both part of the eBay Classifieds group but they are interpreted differently in statistical terms.

Platform	NACE Rev2 code	Code description
Gumtree.com	9609	Other personal service activities
Tradera.se	4791	Retail sale via mail order houses or via Internet
OLX.ro	4791	Retail sale via mail order houses or via Internet
http://www.custojusto.pt/	7022	Business and other management consultancy activities
2DEHANDS.NL	6201	Computer programming activities
www.jofogas.hu	7312	Media representation

The difficulty in establishing the industrial sector of P2P platforms is similar to the lack of clarity in establishing their turnover and profits.

Although this is feasible when there are no other subsidiaries to the legal entity, it is difficult to portray an accurate picture of the larger platforms, which often have more than one subsidiary (MarktPlaats.nl has five, COMUTO, the entity owning BlaBlaCar has 11, while Allegro Group, owner of OLX.PL has seven). In addition, difficulty in pinpointing the legal entity providing the service could hamper consumer efforts to access redress.

Finally, it is important to note that platforms often offer other services besides matching, such as infrastructure⁸⁷ to facilitate financial transactions between peers, insurance, delivery, review systems and others. While some services (e.g. matching services, review systems, etc.) facilitate P2P transactions, others (e.g. insurance, delivery, etc.) are provided as B2C transactions, and entail commercial liability. Given that many platforms group such services together, it can be difficult to determine the platform's liability vis-à-vis peers. Sub-section 4.2 provides an overview of the services provided by online P2P platforms from the empirical research across 485 platforms conducted in this study.

2.4 Platform monetisation models

This sub-section describes how online P2P platforms create and capture economic value. Based on these insights, sub-section 4.3 empirically analyses how monetisation models are used in practice using a sample of 485 P2P platforms, and sub-section 4.5 expands the analysis to identify a typology of three P2P platform business models.

According to Hamari, Sjöklint et Ukkonen (2015)⁸⁸, P2P platforms generate value because they enable exchanges between the peer providers and peer consumers. This value can be economic, but also social, environmental, or other type. Some P2P platforms capture and monetise this value (or part of it) by making peers pay for the service of matching them. Schmalensee and Evans (2007)⁸⁹ make a distinction between P2P commercial platforms and advertiser-supported platforms, such as online search engines, or social media platforms, which do not charge their users.

Researchers have identified several means for P2P platforms to generate revenue. The first one, described by Evans (2008)⁹⁰, is to **charge fees to peers**, which can include:

- Transaction fees (e.g. Taskrabbit, AirBnB, BlaBlaCar);
- Subscription/membership fees (e.g. Lovehomeswap, SpareRoom),
- Add-on services fees, such as premium service, insurance, marketing, escrow, or currency exchange services.

A second source of revenue is the **using and selling data**. According to Martens (2016)⁹¹, P2P platforms collect and aggregate data, which allows them to match peers in a more efficient way than traditional firms connect with their clients.

⁸⁷ It should be noted that the platform is itself not fundamental to the existence of a digital peer to peer transaction and there are emerging peer to peer business models which work without platforms. Block chain technology, for instance, removes the need for a platform in peer to peer markets, leading to an entirely decentralised marketplace without any form of hierarchy and which no single peer controls. An example of this is Open Bazaar, which is a peer to peer network for the sale of goods but without a platform. Similarly, the Committee of the Regions sees what it calls the "commoning economy" (i.e. initiatives that are collectively owned or managed) as an emerging form of the sharing economy. See Committee of the Regions, (2015) The local and regional dimension of the sharing economy, Opinion ECON-VI/005.

⁸⁸ Hamari, J., Sjöklint, M., Ukkonen, A. (2015). The sharing economy: why people participate in collaborative consumption. Journal of the Association for information Science and Technology, DOI: 10.1002/asi.23552.

⁸⁹ Schmalensee, R., Evans, D.S. (2007). Industrial organization of markets with two-sided platforms. Competition Policy International, 39(1), 150-179.

⁹⁰ Evans, D.S. (2008). How catalysts ignite: the economics of platform-based start-ups. Available at:

<http://www.marketplatforms.com/wp-content/uploads/Downloads/How-Catalysts-Ignite-The-Economics-of-Platform-Based-Start-Ups.pdf>

⁹¹ Martens, B. (2016). An Economic Policy Perspective on Online Platforms. Digital Economy Working Paper 2016/05. JRC Technical Reports.

Platforms may also share or trade this data with third parties on data markets, either for improving their services, for market research purposes, advertising, revenue, etc.

According to Choudary (2015)⁹², P2P platforms create value because they control the exchange of three fundamental elements: information, goods and services, or currency. From this assessment, the author summarises three models of P2P platform businesses:

1. In the **“information only”** model, platforms only control the transfer of information which is difficult to monetise. The transfer of money and goods/services takes place outside the platform; therefore, the platform charges subscription, paid promotion, lead generation fees, or fees for add-on services (e.g. premium listing fee).
2. The **“information plus money”** model is associated with platforms (such as Taskrabbit or AirBnB) able to control the transfer of information and the transfer of money. With monetary flow under their control, the platform is capable of directly charging platform peers for its services in the form of a transaction fee. The exchange between peers, however, takes place outside the platform.
3. The **“information plus goods/services plus money”** model⁹³, in which all three flows of resources between peers occur through the platform, and are controlled by it. It suits platforms which enable digital exchanges (e.g. content, software code, piece of advice). An example is clarity.fm,⁹⁴ a platform connecting advice seekers with experts via direct calls. Calls are charged by the platform based on the expert’s rate, with the platform taking a cut.⁹⁵

From this classification, Choudary (2015) proposes different types of P2P platform monetisation models, as Table 2 indicates.

Table 2: P2P platform monetisation models

Model	Monetisation	Resource flow	Exchange	
			Through the platform	Outside the platform
1	Subscription/paid promotion/lead generation/add-on service fee	Goods/services Money Information	✓	✓

⁹² Choudary, S.P. (2015). Platform scale: How an emerging business model helps startups build large empires with minimum investment. Platform Thinking labs Pte. Ltd

⁹³ Normally, it is extremely difficult for a platform to make the transfer of goods and services take place through the platform. At best the platform is capable of tracking this transfer in order to execute monetary exchanges between P2P platform peers, and sometimes provide certain extra services such as variable billing to reflect changes in supply and demand. For example, Uber introduce surge pricing at times of highest or peak demand. This can encourage greater supply by attracting more providers (drivers), but may also temporarily put consumers into a relatively disadvantaged situation. See House of Lords EU Internal Market Subcommittee Online Platforms and the Digital Market Oral and Written Evidence OPL0067, p. 13.

⁹⁴ Choudary, S.P. (2015). Platform scale: How an emerging business model helps startups build large empires with minimum investment. Platform Thinking labs Pte. Ltd

⁹⁵ Please note that the “information plus good/services plus money” is out of the scope of this study. Add-on service fees apply in both “information only” and “information plus money” models.

Model	Monetisation	Resource flow	Through the platform	Exchange the Outside platform	the platform
2	Transaction fee	Goods/services Money Information	✓ ✓	✓	
3	Transaction fee	Goods/services Money Information	✓ ✓ ✓		

Source: Adapted from Choudary (2015): *Platform scale: How an emerging business model helps start-ups build large empires with minimum investment*. Platform Thinking labs Pte. Ltd

According to Choudary's (2015) categorisation, P2P platform business models vary depending on the type of peer exchanges controlled by the platform.⁹⁶ All P2P platforms enable information exchange, while other exchanges (i.e. flows of goods/services and money) are optional. The "information plus goods/services plus money" model is rare because it is difficult for a P2P platform to make the transfer of goods and services occur through the platform. At best, the platform can track this transfer in order to monitor the good conduct of the exchange between peers. This may result in other services being provided by the platform to its peers (e.g. Uber using location-based technologies to follow the rides, calculate distance and issue a bill).

The various ways P2P platforms monetise the peers' exchanges is important to understand as it determines their revenue, and therefore the overall size of P2P markets. In addition, from a consumer policy perspective, it is important to understand what peers are being charged for as this may help determine platform liability.

2.5 Geographical spread of P2P platforms

In literature, the geographical spread of P2P platforms is best described by studies referring to the market as the "sharing economy". The term, as described above, is one of the most commonly used to describe P2P platforms.

According to Mesh⁹⁷, there are more than 9,700 P2P platforms (usually called "sharing economy platforms" on such websites) operating in the world. ThePeopleWhoShare⁹⁸ indicates about 9,000 "sharing economy" platforms in the world, and at least 750 in Europe. These data, however, cannot be fully verified given that there are no statistics about the number of platforms that ceased to exist following registration with on-line P2P platform directories. In addition, some unrelated companies may register with such self-reporting websites as part of their

⁹⁶ Choudary, S.P. (2015). *Platform scale: How an emerging business model helps startups build large empires with minimum investment*. Platform Thinking labs Pte. Ltd

⁹⁷ Mesh (2016). Available at: <http://meshing.it/>

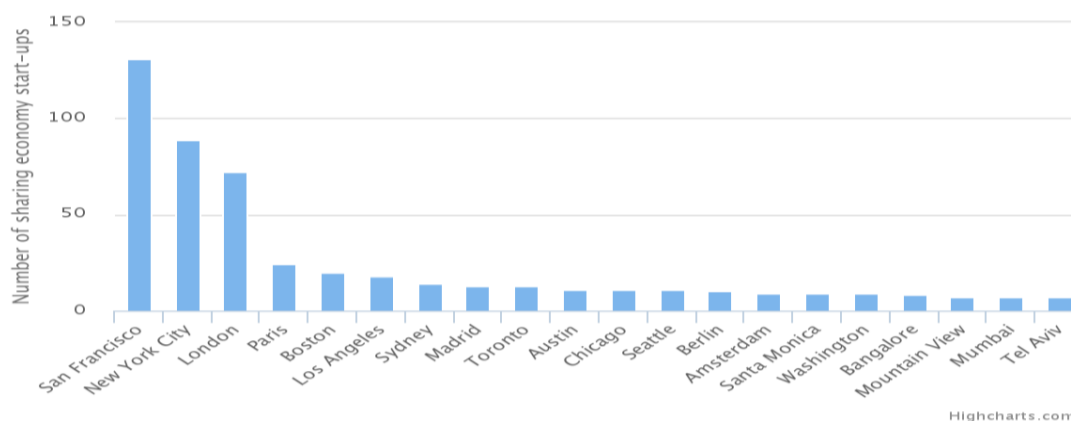
⁹⁸ ThePeopleWhoShare (2016). *Sharing Economy Guide*. Available at: <http://www.thepeoplewhoshare.com/sharing-economy-guide/>

marketing strategy to capitalise on the positive connotations associated with the “sharing economy” term.

Many authors like Evans and Gawer (2016)⁹⁹ or PwC (2016)¹⁰⁰ highlight the quick spread of P2P platforms across the world. Yet, most start-up activities take place in specific hubs. In Europe, according to The Telegraph¹⁰¹, London is by far the most prolific city for generating “sharing economy” platforms, followed by Paris, Berlin and Amsterdam.

A 2015 research paper by JustPark – a P2P platform based in the UK – has found that the UK hosts 10% of businesses involved in the P2P transactions worldwide; which is more than Germany, France and Spain combined. For companies in the UK, London is the preferred location; the city hosts one in 12 of all “sharing economy” companies in the world.¹⁰² However, as the research paper and its methodology are not publicly available, it is difficult to evaluate the accuracy of these findings.

Figure 6: Number of P2P collaborative economy¹⁰³ start-ups by city¹⁰⁴



Source: Davidson, L. (2015). *Mapped: How the Sharing Economy is Sweeping the World*. The Telegraph. Available at: <http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/11882122/Mapped-how-the-sharing-economy-is-sweeping-the-world.html>

According to a study by the French Ministry of Economy, Industry and Digital Affairs, in 2015 nearly 9,000 start-ups made up the global market for collaborative economy. According to the study, the US and France appear to be the world leaders in terms of business volumes and diversity of supply. Both countries have many

⁹⁹ Evans, P., Gawer, A. (2016). The Rise and Fall of Platform Enterprise. A Global Survey. The Centre for Global Enterprise.

¹⁰⁰ PwC (2015). The Sharing Economy. Consumer Intelligence Series. Available at: <http://www.pwc.com/us/en/industry/entertainment-media/publications/consumer-intelligence-series/assets/pwc-cis-sharing-economy.pdf>

¹⁰¹ Davidson, L. (2015). *Mapped: How the Sharing Economy is Sweeping the World*. The Telegraph. Available at: <http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/11882122/Mapped-how-the-sharing-economy-is-sweeping-the-world.html>

¹⁰² Smith, R. (2015). How London became the sharing economy hotspot of Europe. Business Advice. Available at: <http://businessadvice.co.uk/procurement/working-spaces/how-london-became-the-sharing-economy-hotspot-of-europe/>

¹⁰³ The collection of platforms excludes resale platforms, but includes other sectors such as finance.

¹⁰⁴ This includes all collaborative economy platforms, including crowdfunding and other types of platforms that were excluded from the scope of this study.

leading platforms which embarked upon internationalisation strategies (i.e. Airbnb in the US and BlaBlaCar or Ulule in France).¹⁰⁵

2.6 Overall indicative size of P2P markets

Empirical data on the significance and impact of the P2P transactions market tend to be patchy and very limited. According to Coyle (2016) and NESTA (2015), this is partly due to the absence of a common definition of terms such as “sharing economy” or P2P transactions, and practical challenges in measuring them.¹⁰⁶ Due to differences in the methodology deployed by different national studies, it is difficult to obtain a harmonised and comparable picture about the extent of the P2P economy across different countries. Therefore, some caution should be applied when interpreting the data reported below. Similarly, the situation applies also to (re)sale platforms where a harmonised definition is difficult to provide due to continuous evolution of these platforms, cross-country and cross-sectoral activities, and the diverse typologies of such platforms.^{107,108} Nevertheless, this effort is useful to understand the scope of the P2P phenomenon and to assess the potential implications for consumers. For instance, the European Commission (2016) highlights that potential gains from better use of capacities resulting from the collaborative economy could add EUR 160-572 billion to the EU economy.¹⁰⁹

One way to assess the size of P2P markets is to measure **the revenue earned by P2P platforms**. A 2016 study by PwC¹¹⁰ carried out desk research on five P2P markets (accommodation sharing, transport sharing, on-demand household services, on-demand professional services, collaborative finance) by looking at company revenue data and secondary reports, and extrapolating this information to the EU-level. The study estimated that the European sharing economy facilitated EUR 28 billion worth of transactions and generated EUR 4 billion in revenues in 2015. As confirmed by the European Commission (2016), this indicates that the collaborative economy is still at a very early stage of development and is likely to continue to grow.¹¹¹ The following table summarises the net revenues and commerce generated via collaborative platforms between 2013 and 2015, based on the PwC (2016) findings.¹¹²

Table 3: Net revenue and growth rate of collaborative platforms in five sectors in the EU¹¹³ (EUR billion)

Year	Net revenue	Growth (%)	Total commerce	Growth (%)
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¹⁰⁵ DGE (2015), Enjeux et perspectives de la consommation collaborative. Available at: http://www.entreprises.gouv.fr/files/files/directions_services/etudes-et-statistiques/prospective/Numerique/2015-07-Consommation-collaborative-Rapport-final.pdf

¹⁰⁶ Nesta (2015). Towards an index of the collaborative economy. London: Nesta. Available from <http://www.nesta.org.uk/publications/towards-index-collaborative-economy>

¹⁰⁷ Copenhagen Economics (2015): Online Intermediaries: Impact on the EU Economy. Available at: <https://www.copenhageneconomics.com/dyn/resources/Publication/publicationPDF/9/189/0/1253-01%20Edima%20Online%20Intermediaries%20Report%20FINAL%2010JAN2012.pdf>

¹⁰⁸ Evans P. and A. Gawer (2016): The rise of the Platform Enterprise – A Global Survey. The emerging Platform Economy Series No. 1. Available at: http://www.thecge.net/wp-content/uploads/2016/01/PDF-WEB-Platform-Survey_01_12.pdf

¹⁰⁹ European Commission (2016). A European agenda for the collaborative economy, COM (2016) 356 final

¹¹⁰ PwC (2016). Assessing the size and presence of the collaborative economy in Europe

¹¹¹ European Commission (2016). Commission staff working document “European Agenda for the Collaborative Economy – Supporting analysis”, SWD (2016) 184 Final, p. 9.

¹¹² European Commission (2016). Commission staff working document “European Agenda for the Collaborative Economy – Supporting analysis”, SWD (2016) 184 Final, p. 9.

¹¹³ The five sectors are: accommodation sharing, transport sharing, on-demand household services, on-demand professional services and collaborative finance.

2013	1.0		9.9	
2014	1.8	55	15.3	80
2015	3.6	76	26.9	97

Source: PwC (2016)

The PwC study did not consider resale sector. However, a 2010 study by Copenhagen Economics¹¹⁴ has estimated the **economic value of “online intermediaries”**, including (re)sale goods online platforms¹¹⁵:

- A GDP contribution of EUR 160 billion per year (EU-27).
- A value creation beyond GDP, comprising value of B2B e-commerce, online advertising, and free services, of EUR 600 billion.
- An indirect productivity impact on other firms of EUR 150 billion per year.

In total, the study found that online intermediaries contributed with an economic benefit of EUR 350 billion in 2009. This number corresponds to the European Commission estimate of EUR 160-572 billion.

Another way to measure the size of P2P transactions is to consider **the revenue earned by peer providers from their activities on the online P2P platforms**. As argued by a 2016 CEPS study (De Groen and Maselli, 2016¹¹⁶) on the impact of the collaborative economy on the labour market, the revenue generated by peer providers from platforms is directly linked to ratings and reviews, and earnings vary from one platform to another. Earnings per hour on platforms intermediating physical services are higher than on platforms intermediating virtual services. Within these categories, higher skills are better remunerated than low or medium-skilled services. When earnings are compared to the income of employees in the offline economy, the income per hour on physical services tends to be above the national minimum wage.

The following table shows the median gross hourly earnings by type of activity on the 2,396 tasks executed on the ListMinut platform between December 2013 and December 2015. Listminut is a matching platform for supply and demand of personal services such as gardening, home repair, cleaning, etc.

¹¹⁴ Copenhagen Economics (2015): Online Intermediaries: Impact on the EU Economy. Available at: <https://www.copenhageneconomics.com/dyn/resources/Publication/publicationPDF/9/189/0/1253-01%20Edima%20Online%20Intermediaries%20Report%20FINAL%2010JAN2012.pdf>

¹¹⁵ Online intermediaries provide platforms for the exchange of goods, services or information. They comprise: 1- Search providers that make information supplied by third parties accessible and searchable for other Internet users (e.g. Google, Yahoo!); 2 - Social networks that allow users to find and exchange information in social circles (e.g. Facebook, LinkedIn); 3- E-commerce platforms that allow others to set up shops on their platforms in order to make their products and services available to Internet users (e.g. eBay, Amazon, Priceminister, Allegro); 4- Cloud computing activities whereby IT users get access to distributed data processing via a common Internet platform.

¹¹⁶ De Groen, W. P., Maselli, I. (2016). The impact of the Collaborative Economy on the Labour Market.

Table 4: Median gross hourly earnings by type of activity on platform ListMinut (personal services) and in the offline labour market between December 2013 and December 2015

Category	ListMinut (completed tasks)	Offline Labour market	Difference
1. Home repair	17.50	12.70	+4.8
2. Animals	26.00	10.82	+15.18
3. Households	10.50	8.20	+2.3
4. Tutoring	15.00	13.06	+1.94
5. Events	13.00	12.12	+0.88
6. Gardening	13.00	11.35	+1.65
7. Transport	17.50	10.94	+6.56
8. Computer science	14.00	12.51	+1.49
9. Babysitting	7.67	10.78	-3.11
10. Wellness	26.00	10.29	+15.71

Source: De Groen, W.P., I. Maselli and B. Fabo (2016), "The Digital Market for Local Services: A one-night stand for workers?", CEPS Special Report No. 133, CEPS, Brussels, April.

Furthermore, a 2015 consumer survey by ING¹¹⁷ carried out in 15 countries (12 EU countries and US, Australia and Turkey), showed that P2P providers earned incomes ranging from EUR 0 to EUR 50,000 from P2P platforms over the past year. The report noted that the vast majority of peers earned EUR 1,000 or less over the previous year. The mean of the 14,829-strong sample is EUR 2,500. However, the report indicated the median (in this case, EUR 300) as more representative, given the highly-skewed income distribution.

Data from national surveys confirm these results. A SIFO report in Norway indicates for instance that 45% of survey respondents have heard about the term "sharing economy". According to the report, 42% of respondents have heard of AirBnB, but only 3% are active users; similarly, 41% have heard of Uber, and 1% are active users.¹¹⁸ In France, data from the French Ministry of Economy show that 9 French citizens out of 10 have had an activity in the "collaborative economy".¹¹⁹

A 2016 study by the JP Morgan Chase Institute¹²⁰ shows that 10.3 million people have earned income on online platforms between 2012 and 2015, but this figure accounts for the U.S. only. The study distinguishes "labour platforms" (e.g. Uber or TaskRabbit) that connect customers with freelance or contingent workers who perform discrete projects or assignments, and "capital platforms" (e.g. eBay or Airbnb) that connect customers with individuals who rent assets or sell goods peer-to-peers. It finds that, while active, **platform earnings equate to 33% of total income in labour platforms, and 20% on capital platforms.**

¹¹⁷ ING International Survey (2015), WHAT'S MINE IS YOURS – FOR A PRICE. RAPID GROWTH TIPPED FOR THE SHARING ECONOMY.

¹¹⁸ SIFO (2015). The sharing economy in Norway: A study of experiences and attitudes towards sharing, recycling, digital sharing platforms and user evaluations in the Norwegian population, p. 19. This section of the study delineates "sharing" to things/services that are traded between individuals using online sharing platforms involving renting or lending, hence excludes re(sale) goods platforms.

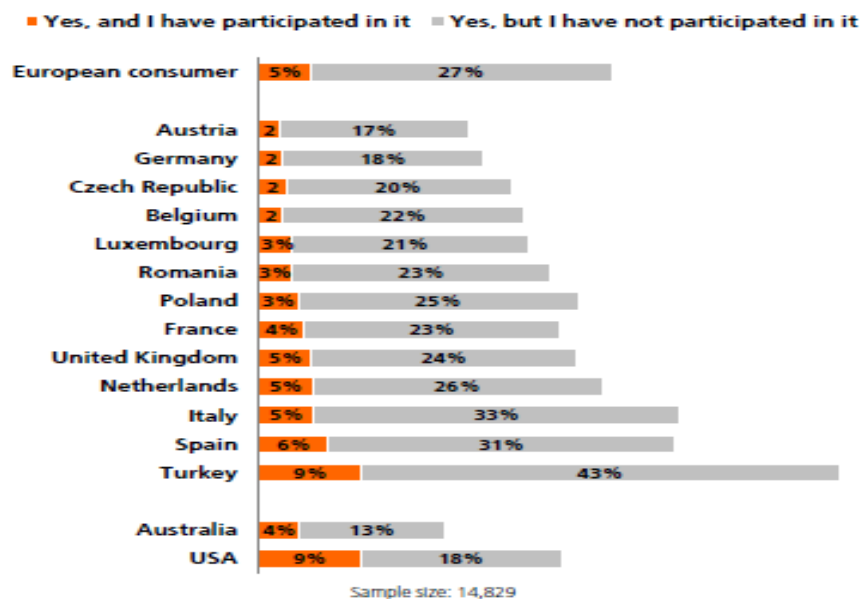
¹¹⁹ Economie.Gouv.Fr (2016). Les chiffres clés de l'économie collaborative. Available at: <http://www.economie.gouv.fr/vous-orienter/entreprise/numerique/chiffres-cles-leconomie-collaborative>

¹²⁰ JP Morgan Chase Institute (2016). Paychecks, Paydays, and the Online Platform Economy. Big Data on Income Volatility. Available at: <https://www.jpmorganchase.com/corporate/institute/document/jpmc-institute-volatility-2-report.pdf>

When it comes to peer participation rates, JP Morgan Chase Institute (2016) shows that **4 % of adults in the US participated to the online platform economy over the past three years.**

A 2015 study by ING¹²¹ shows similar results with participation in the “sharing economy” at only 5% on average in Europe, and about a third of people in Europe having heard of the sharing economy (see Figure 7).

Figure 7: Have you ever heard of the sharing economy?

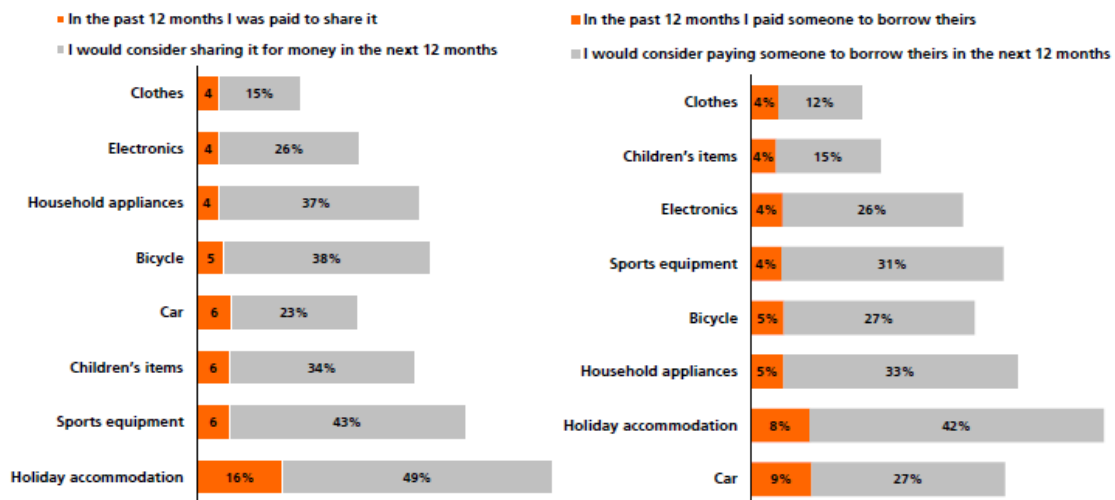


Source: ING (2015). *WHAT'S MINE IS YOURS – FOR A PRICE. RAPID GROWTH TIPPED FOR THE SHARING ECONOMY.*

According to the ING (2015) survey, holiday accommodation is by far the largest sector within the sharing economy with 49% of respondents indicating that they would be willing to share their homes and 16% indicating that they had been paid to share their homes in the last 12 months. On the side of peer consumers, the most popular item to borrow is cars, followed by holiday accommodation.

¹²¹ The ING Survey is based on consultations with the following 12 European countries: UK, Spain, France, Belgium, Netherlands, Germany, Luxembourg, Czech Republic, Poland, Romania, Austria and Italy. In the ING survey, the sharing economy was described to participants as utilising goods (such as a car, house or lawnmower) that would otherwise be Idle or unused, p. 3.

Figure 8: Of the following items, what is your attitude to sharing/borrowing them?



Source: ING (2015). *WHAT'S MINE IS YOURS – FOR A PRICE. RAPID GROWTH TIPPED FOR THE SHARING ECONOMY.*

Finally, there are signs of growing maturity within the P2P market. In the fields of transportation and accommodation, two of the key sectors for P2P markets to date, two platforms (AirBnB and Uber) have established themselves firmly as market leaders. While their business models are evolving constantly (see e.g. the recent launch of UberPool and the broadening out of both Airbnb and Uber's business models), the size of these companies' peer network has had increasing impacts on the development of the sector that they are in. For instance, a number of companies have emerged whose business model is closely linked to AirBnB, e.g. providing a "concierge" service for AirBnB hosts who do not have the time (or are not willing) to manage their own listings on the site. Other companies in the sector have actively tried to differentiate themselves from AirBnB by focusing on niche markets like luxury apartments (onfinestay), family (knok), homeswaps (lovehomeswap), etc.) or by providing add-on services like management/optimising of listings (Evolve), concierge (hostmaker), etc.

At the same time, if an increasing number of peer consumers and peer providers meet on a small number of dominant platforms, then this could lead to a situation of near perfect competition between peers combined with market concentration characteristics at the level of the platforms. Such a development has implications not just for profitability and market access for new platforms, but also for the relationship between peers and the platforms, as the large number of peers become increasingly dependent on a small number of dominant platforms for their access to the market.

2.7 Summary of findings

This sub-section summarises the findings of the existing academic literature and other sources as well as policy issues about P2P markets.

Although P2P online platforms are not a new phenomenon, their growth has raised a number of consumer policy questions.

One important question lies in the **nature of the interactions** between peer consumers and peer providers. These interactions may take different forms and involve monetary transactions, transfer of ownership or give temporary access to a good/service. Each type of interaction may imply different types of relationships among peers and between them and the platform.

The lack of transparency about traders or professionals acting as **peer providers** on P2P platforms creates uncertainty about the applicability of the consumer policy framework which was developed for B2C transactions.

Peer user data collected by online P2P platforms is routinely used/reused and it is also sometimes shared with third parties, which may pose issues related to privacy, reputation and switching costs. (see sub-section 4.4)

Voluntary, self-regulatory approaches implemented by P2P platforms may not offset the risks and potential for detriment for consumers as platforms are not incentivized to address issues that impose costs only on third parties as long as they are not liable for such costs.

The **geographical spread of P2P platforms** indicates that Europe hosts a high number of P2P platforms, but there are no reliable data about the numbers of P2P platforms operating in the EU or founded in the EU. There are few data about the actual size of the P2P markets subject to this study and estimates are difficult to compare as their scope is different

As indicated in sub-section 3.6, the P2P economy is expected to grow further in the coming years. Monetisation models, as shown through the “uberisation” phenomenon and other models described in sub-section 3.4, are subject to constant change and adaptation to market conditions. It is therefore important to ensure that any consumer issues that emanate from the emergence of online P2P platforms are addressed.

3 P2P platform services and business models

This section builds on the academic and policy review of section 3 and provides an empirical mapping of P2P platform services, including their main economic features and potential consumer policy issues. A focus is placed on platform services and how they are used to extract commercial value, i.e. business models.

This section starts by defining the methodology for selecting the 485 platforms reviewed in this study (sub-section 4.1), and then analyses them based on a transaction-oriented typology (sub-section 4.2). The analysis moves on to examine how platforms “sell” these services (sub-section 4.3), how data is protected (sub-section 4.4) and how the platforms can be classified according to a business model typology (sub-section 4.5). In this study, the results of this section feed into the development of the business model classification in the final report of this study.

3.1 Methodology for platform selection

The empirical analysis in this section is carried out within the overall study scope indicated in sub-section 2.4, and according to the report’s objectives indicated in sub-section 2.3. The results are based on an analysis of 485 European P2P platforms operating in the EU including four non-EU born platforms such as eBay, AirBnB, Uber and Taskrabbit). The platforms were selected by considering the study’s scope as well as a number of additional criteria indicated in sub-section 4.1.1. This sub-section describes the selection criteria, the methodology for categorising platform services, as well as the limitations of this analysis. The full list of platforms is in Annex 1.4 of this report.

3.1.1 Platform selection criteria

The aim of the platform screening is not to provide a complete inventory of P2P platforms, but to have a sample that includes platforms in the relevant markets. Initially, the selection aimed to identify five platforms per P2P market per country, leading to up to 25 platforms per country. This was not always possible, given the different market sizes. Large markets like France, the UK or Germany are represented by 25 or more platforms, while small markets such as Latvia, Croatia or Slovakia are represented by up to six platforms. In countries with over 25 platforms, the selection was limited to the most popular platforms in terms of daily unique visitors and to those of specific interest to the study due to the nature of their offer.

Platforms were selected using local experts as well as desk research (e.g. grey literature, websites of consumer associations, consumer blogs and forums, media). Desk research was combined with the survey data from Task 2 to identify the most commonly-used online P2P platforms in each country for each of the five P2P markets indicated above. Of the 485 platforms identified in Task 1, 10 were selected for a more in-depth analysis as part of the Task 4 case studies.

Of the 485 platforms in the sample, only four (AirBnB, Uber, TaskRabbit and eBay) were established outside of the EU or Norway. These platforms were included, however, given their popularity and because they have a registered office in an EU

country (Ireland for AirBnB, UK for Uber and TaskRabbit, and Luxembourg for eBay).

The platform selection, based on the limitations indicated in sub-section 2.4, resulted in a database of 485 platforms across the five P2P markets under study, and across the 28 EU Member States plus Norway. Detailed indications of the types of platforms identified in each country are given in Table 5.

Table 5: Number of platforms per country and P2P market¹²²

	(Re)sale goods	Sharing/renting goods	Sharing/hiring rides	Sharing/renting accommodation	Odd jobs	Total - collaborative platforms ¹²³	Total all platforms
Austria	6	3	1	6	4	14	20
Belgium	6	4	6	6	7	23	29
Bulgaria	10	1	8	0	2	11	21
Cyprus	8	0	2	3	1	6	14
Czech Republic	6	4	1	1	0	6	12
Germany	5	5	7	4	5	21	26
Denmark	5	6	4	2	5	17	22
Estonia	5	3	4	0	1	8	13
Spain	5	5	5	4	4	18	23
Finland	5	2	3	1	1	7	12
France	5	5	5	5	5	20	25
Greece	5	1	2	0	2	5	10
Croatia	5	0	1	0	0	1	6
Hungary	8	1	4	3	1	9	17
Ireland	1	4	0	4	4	12	13
Italy	5	6	5	0	4	15	20
Lithuania	9	3	0	4	4	11	20
Luxembourg	4	1	1	7	0	9	13
Latvia	2	0	1	0	0	1	3
Malta	5	3	1	2	0	6	11
Netherlands	9	3	5	4	7	19	28
Norway	5	1	2	1	3	7	12
Poland	5	5	7	3	5	20	25
Portugal	5	2	3	3	2	10	15

¹²² International platforms (i.e. Uber, Airbnb, BlaBlaCar) are considered only in the countries where they have their EU headquarters.

¹²³ Excluding (re)sale platforms, according to the European Commission (2016) definition of “collaborative economy” reported in sub-section 2.1.

	(Re)sale goods	Sharing/renting goods	Sharing/hiring rides	Sharing/renting accommodation	Odd jobs	Total - collaborative platforms ¹²³	Total all platforms
Romania	6	4	2	1	1	8	14
Sweden	6	4	0	2	1	7	13
Slovenia	5	2	3	3	1	9	14
Slovakia	4	0	0	2	0	2	6
UK	7	4	6	5	6	21	28
Total	162	82	89	76	76	323	485

Source: VVA analysis of 485 P2P platforms

As the table indicates, the most represented P2P market in our research is (re)sale goods, where we identified 162 platforms (33% of the total sample)¹²⁴. The other four P2P markets are represented as such:

- Sharing/renting goods: 17% of the total sample;
- Sharing/hiring rides: 18% of the total sample;
- Sharing/renting accommodation: 16% of the total sample;
- Odd jobs: 16% of the total sample.

There are several reasons why (re)sale platforms are most represented in our sample. First of all, the online infrastructure (e.g. e-shops) and customer community created for B2C transactions could be easily applied to P2P (re)sales – in fact many of the platforms operating in P2P market facilitate both types of transactions: B2C and P2P (i.e. MarktPlaats, OLX). Second, most (re)sale platforms were set up before 2010 (see sub-section 4.2.1), whereas collaborative platforms are more recent and have so far been set up in fewer countries. Finally, (re)sale transactions are not location-bound or less location bound than other P2P markets under study: while peers need to be in the same geographical area to share a car or accommodation, for instance, they can mail items they have transacted, thus expanding the (re)sale market's peer base¹²⁵.

3.1.2 Service categorisation

Section 4 of this study categorises P2P platform services according to their relevance to P2P transactions. In this study, platform services are classified into three categories: **pre-transaction, transaction and post-transaction services**. The classification is partly based on academic literature, partly on consumer policy concerns and partly on empirical results. Broadly, the sources of the service categorisation system used in this study are the following:

¹²⁴ Note that the market representativeness of this sample could affect the data reliability and the results of this section.

¹²⁵ On a side note, the main exponents of other four sectors were created due to local inefficiencies and then they scaled up (see case studies in Task 4), suggesting they tend to expand more slowly than (re)sale platforms.

- **Academic literature:** Henten and Windekilde (2016)¹²⁶ conclude that transaction cost theory is central to understanding the “sharing economy”, and they discuss platform services in relation to P2P transactions. Allen and Berg (2014)¹²⁷ also describe platform services based on their relevance to P2P transactions, and include many of the services used in this study (e.g. “reputational rating mechanisms”, “guarantees, bonds and insurance”, as well as “personalised transactions”).
- **Consumer policy concerns:** The OECD (2016)¹²⁸ states that external and self-regulatory tools are used to protect consumers on P2P platforms. Self-regulatory tools are based on trust, as found by Martens (2016)¹²⁹, and trust is fostered through several services before the transaction occurs, as suggested by Koopman, Mitchell and Thierer (2015)¹³⁰. During the transaction, peer consumers should be provided with fair Terms and Conditions and safe payment methods, among others. After the transaction, Directive 2013/11/EU requires businesses engaged in B2C transactions, (including some P2P platforms), to provide information about alternative dispute resolution for consumer issues. Effective dispute resolution mechanisms are also advocated by the OECD (2016). This study’s categorisation includes such mechanisms, as well as trust-building tools such as peer review and reputation systems.
- **Empirical results:** Input from Task 6 (workshops) or Task 4 (case studies) was used to better define platform services, as well as to better organise them.

Within each of the three broad service categories, a number of P2P platform services can be identified, as shown in the figure below. Based on this list of services, the data collection exercise of this task reviewed the 485 platforms indicated in Table 5 and their service offer.

¹²⁶ Henten, A.H., Windekilde, I.M. (2016). Transaction costs and the sharing economy. *info*, Vol. 18 Iss: 1, pp.1 – 15. Available at: <http://www.emeraldinsight.com/doi/pdfplus/10.1108/info-09-2015-0044>

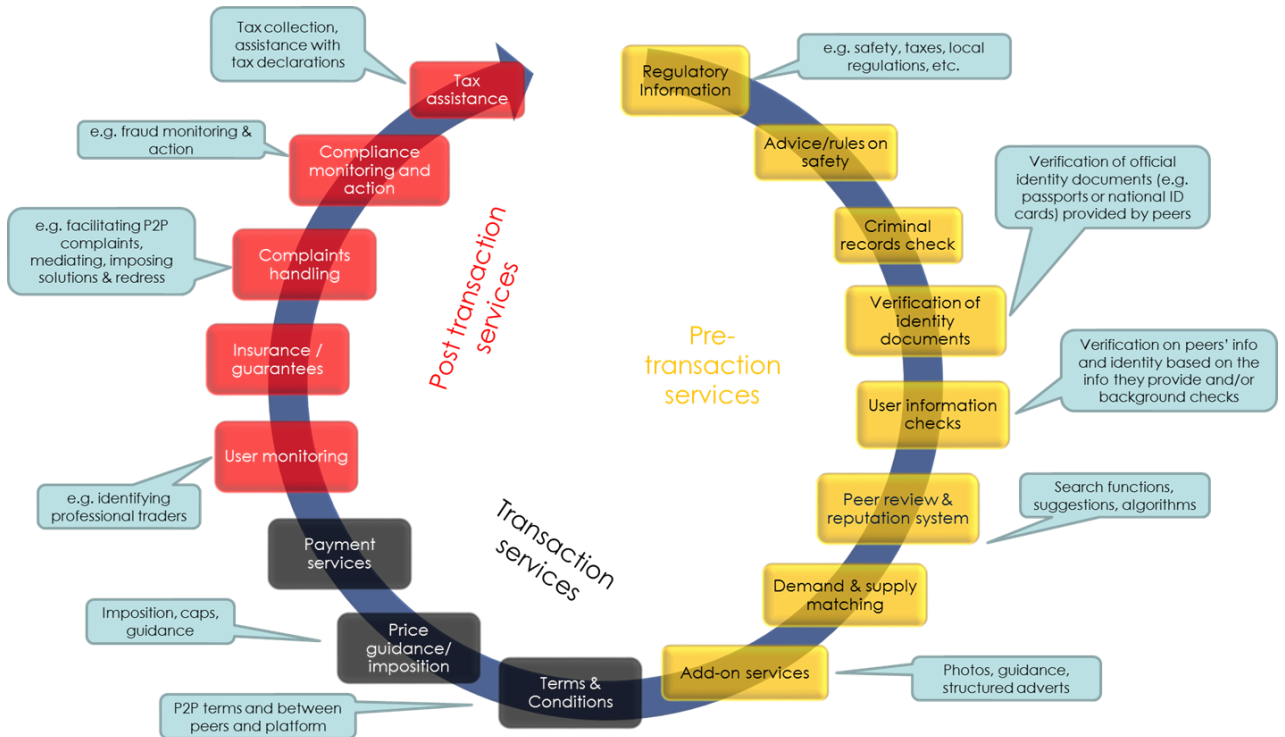
¹²⁷ Allen, D., Berg, C. (2014). The Sharing Economy. How over-regulation could destroy an economic revolution. Available at: https://ipa.org.au/portal/uploads/Sharing_Economy_December_2014.pdf

¹²⁸ OECD (2016). Protecting Consumers in Peer Platform Markets: Exploring the issues. OECD Digital Economy Papers (253).

¹²⁹ Martens, B. (2016). An Economic Policy Perspective on Online Platforms. Digital Economy Working Paper 2016/05. JRC Technical Reports.

¹³⁰ Koopman, C., Mitchell, M., Thierer, A. (2015). The Sharing Economy and Consumer Protection Regulation: The Case for Policy Change. *The Journal of Business, Entrepreneurship & the Law*, 8(2). Available at: <https://www.mercatus.org/system/files/Koopman-Sharing-Economy.pdf>

Figure 9: Services provided by P2P platforms



Source: VVA

The service categories illustrated above result in 17 P2P platform services, as summarised in the table below. Note that, of these, only 15 are analysed in this report. Tax assistance services (tax collection and tax assistance) are outside the scope of the study (but they are briefly addressed in Task 4).

Table 6: Overview of P2P platform services

Stage of the transaction	Service type			Service description
Pre-transaction	Regulatory information	Information on rules & taxes		Information on the applicable rules in the sector (e.g. health and safety rules, local regulations, etc.) and potential tax implications of P2P transactions.
	Advice/rules on safety			Advice on how to ensure safety in P2P transactions for peers, and /or rules on how to enforce safety.
	Identity verification	Pre-screening	Criminal records check	Verification of the peers' previous criminal history based on a background check.

Stage of the transaction	Service type		Service description
		Verification of identity documents	Verification of identity documents provided by peers
		User information checks (through email or social media)	Opportunity to confirm user information and identity through automated email or phone and links to social media accounts and/or a background check ¹³¹ .
	Demand & supply matching		Tools used to actively stimulate the matching between peer providers and peer consumers, such as advanced search functions, geolocation, matching algorithms, etc.
	Add-on services		Provision of add-on services to the P2P interaction, including advice on presenting listings, enhanced promotion features of listings, options to further verify identity, invoicing services, etc.
	Peer review & Reputation system	Peer review system	Availability of a review and feedback system on other peers that is visible to the community, e.g. via a star-based rating mechanism, written feedback, etc.
		Reputation system	Platforms maintain mechanism through which users are rewarded for their performance i.e. profile badges. This also includes peer ratings
Transaction	Terms & Conditions	T&Cs - platform use	T&Cs for using the platform's services.

¹³¹ Background checks and user information checks (by email, phone or social media) were considered as one service offered by P2P platforms in data collection in Task 1. For the purpose of Task 4, they were separated and the case studies provide more details about background checks, when available.

Stage of the transaction	Service type		Service description
	ns	T&C - P2P interactions ¹³²	T&Cs governing, in part or in full, the interaction between two or more peers.
	Price guidance/imposition		Mechanisms affecting the pricing of goods/services offered between peers by imposing a certain price/price range/maximum price, providing price setting tips or setting prices automatically.
	Payment services		Availability of payment methods for peers to complete their transactions, including management of payments by platforms and escrow services ¹³³ .
Post-transaction	User monitoring		Monitoring of user activity to ensure compliance with the platform's rules and/or T&Cs.
	Insurance/guarantees		Insurance services, either mandatory or optional, to the transaction.
	Complaints handling		Mechanisms available to handle peer complaints, e.g. via email, ticketing service, hotline, etc.
	Compliance monitoring and action		Monitoring of the goods and services listed on the platform and active engagement in detecting and removing those against platform rules.
	Tax assistance	Tax collection	
Assistance with tax declarations		Platforms assist with tax declaration which then peers can report to the relevant authorities ¹³⁴	

3.1.3 Limitations

¹³² T&Cs for P2P interactions range from simple guidelines on keeping the transaction within the law (e.g. provide truthful information) to setting contractual conditions like cancellation policies or rules of behaviour (e.g. TaskRabbit has a set of marketplace guidelines in place to adjust peer provider services to their standards).

¹³³ This covers only payments facilitated or managed by platforms, so payments outside the platform (e.g. in cash) are not covered.

¹³⁴ Services such as tax collection and assistance with tax declarations originate from the case study analysis under Task 4 and they were not included in the Task1 data collection.

The methodological approach used for analysing platform services has several important limitations, which can influence the reliability of this study's results. Although this study's methodology is based primarily on academic and policy literature, the difficulty of translating theoretical concepts into practical research on platform services remains. This may lead to biases; which readers should consider when interpreting the results.

First, one limitation of this study's empirical research concerns the representativeness of the platform sample summarised in Table 5. Platforms were selected based on whether they were available in the countries under study, while also trying to maintain a balance between different P2P sectors. As described in sub-section 4.1.1, there are almost twice as many (re)sale platforms compared to platforms in the four other P2P markets under study.

Table 7 below compares the percentage of platforms selected in each P2P market with the Task 2 survey results on platform use and peer consumer/provider engagement in monetary transactions. The table confirms that (re)sale goods platforms are the most popular, which justifies the fact that they make up a larger share of the platform sample than the other sectors. Sharing/renting goods and odd jobs platforms are particularly over-represented in the platform sample. However, it is important to bear in mind that the aim of the sample is not only to have a representative picture of P2P markets but also to capture the diversity in business models and services and to provide reliable results for all five sectors within the scope of the study.

Table 7 : Comparison between Task 1 platform selection and Task 2 survey responses in terms of P2P market distribution of peers.

	(Re)sale goods	Sharing /renting goods	Sharing /hiring rides	Sharing/ renting accommodation	Odd jobs
% of platforms in the sample	33%	17%	18%	16%	16%
% of survey respondents that used a platform in the past 12 months	72.9%	12.1%	14.8%	14.4%	7.7%
% of peer consumer respondents engaged in monetary transactions	62.1%	4.4%	9.3%	8.2%	3.8%
% of peer provider respondents engaged in monetary transactions	56.4%	4.3%	5.4%	8.3%	3.5%

Source: VVA analysis based on Task 2 results and Data collected from the websites of 485 sharing platforms from March to December 2016

Second, this study's service categorisation could have overlooked certain platform services that could point to additional consumer issues. The range of 15 services illustrated in Table 6 and in Figure 5 translates the academic and policy priorities described in section 3 into empirical findings. However, it is not an exhaustive list of platform services, and this limitation should be considered when interpreting the results in sub-section 4.2.

Third, this study's categorisation of P2P platform business models focuses on the business models of P2P platforms only¹³⁵. It should be noted that platforms and business models are likely to evolve and change over time. It should also be noted that within a single platform several types of business models may co-exist.

Fourth, there is a lack of in-depth research and transparency on certain aspects such as escrow services, the way user data is used or how consumers can access redress. Where possible, this report relies on input from other Task reports to fill the gap in qualitative information. These aspects are addressed more fully in the case studies in Task 4.

Fifth, due to the limited sample of P2P platforms in some countries, cross-country comparisons are not possible based on the sample of online P2P platforms collected for this study. While certain countries are well-represented in the sample, others like Latvia or Croatia contain too few platforms to allow for accurate estimations. The country fiches in annex to this report give an overview of the country-level situation in each of the covered countries.

Sixth, the quantitative data in this analysis cannot determine statistically-robust relationships between types of services offered and other platform characteristics such as the peer base or years of activity of the platform. This might be subject for future research.

Seventh, the analysis in this task report is limited to the dataset collected for Task 1. At times, as indicated above, insights from stakeholders (task 6) or from the platform case studies (task 4) are used to explain certain empirical results – but this is not done systematically in this task report. The final report brings together the results of all tasks into a single document.

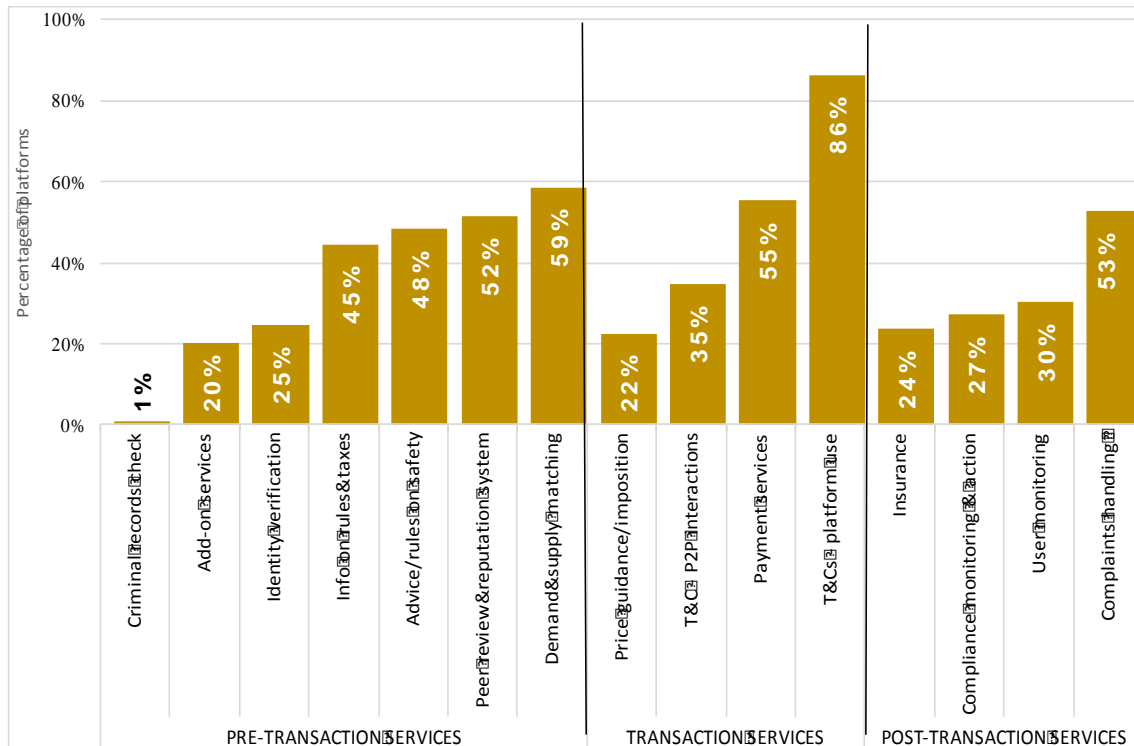
3.2 Services offered by P2P platforms

3.2.1 Overview of platform services

Figure 10 shows the prevalence of services provided by P2P platforms across the sample of 485 P2P platforms in the EU 28 Member States and Norway examined for this study. Services are divided according to the three categories mentioned above (pre-transaction, transaction and post-transaction).

¹³⁵ Indeed, the consumer survey in Task 2 as well as the focus groups have found that (at least some) peers participate in the sharing economy for economic reasons and the way in which they choose to structure their engagement with this market could be seen as a peer-level "business model". This is clear when the peer provider is classified as a business / trader (a number of relevant indicators for this determination have been identified in Task 5) but even individual peers could be seen to be operating different business models such as reducing their costs (e.g. ride sharing) or supplementing their income (e.g. making a profit by renting out a second home).

Figure 10: Prevalence of services offered by selected P2P platforms



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

The Task 1 results displayed in Figure 10 above indicate **that the service range of most P2P platforms in this study's sample is concentrated in the pre-transaction phase**. This indicates that pre-transaction services tend to be more prevalent than transaction or post-transaction services. The finding is in line with the literature and was validated as part of the two Task 6 workshops. According to Brescia (2016), whereas conventional businesses generate trust among consumers via explicitly complying with governmental regulations, platforms must seek other ways of creating trust¹³⁶, including, as Slee (2013)¹³⁷, Luca¹³⁸ or Lobel (2016)¹³⁹ suggest, through reputational systems such as reviews, ratings and recommendations.

3.2.2 Pre-transaction services

¹³⁶ Brescia, R. (2016). *Regulating the Sharing Economy: New and Old Insights into an Oversight Regime for the Peer-to-Peer Economy*. Nebraska Law Review, Vol. 95, No. 1, p. 87 (2016). Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2728900

¹³⁷ Slee, T. (2013). Some obvious things about internet reputation systems. Available at: <http://tomslee.net/2013/09/some-obvious-things-about-internet-reputation-systems.html>

¹³⁸ Luca, M. (2016). Designing Online Marketplaces: Trust and Reputation Mechanisms (No. w22616). National Bureau of Economic Research. Available at: http://www.hbs.edu/faculty/Publication%20Files/17-017_ec4ccd0-4348-4eb9-9f46-86e1ac696b4f.pdf

¹³⁹ Lobel, O. (2016). The Law of the Platform. Univ. of San Diego, Legal Studies Research Paper Series, Mar. 2016, available at <http://ssrn.com/abstract=2742380>.

Pre-transaction services create the conditions to enable peers to enter a P2P transaction on the platform. As described by Allen and Berg (2014), such mechanisms help lower transaction costs, encouraging peers to engage in transactions. Pre-transaction services aim to match peers, to create a trustworthy environment on the platform through peer review and reputation systems, user identity verifications or information regarding applicable rules or safety concerns. From a consumer policy perspective, services at this stage of the transaction should help improve transparency and allow peers to make well-informed transactions.

Figure 11 reports the findings for each pre-transaction service. Only 4 platforms run **criminal records checks** (DoIDo, AirBnB¹⁴⁰, MoboCars and TaskRabbit), which is by far the rarest service in the sample. In contrast, 59% of platforms actively seek to match peer consumers and peer providers through **matching tools** such as geolocation, refined search options, algorithms. This means that about 41% of platforms only facilitate P2P transactions without actively trying to generate a match between the demand and supply sides of the market.

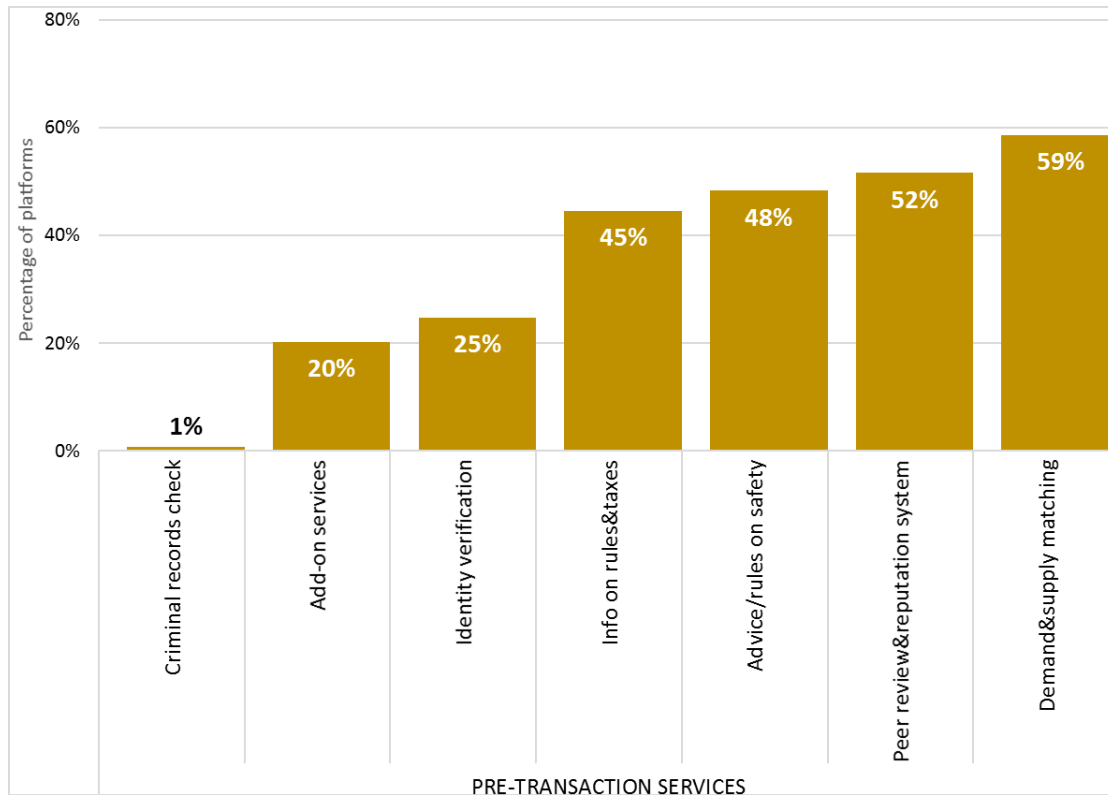
Over half (52%) of the platforms provide **peer review and reputation systems**, a crucial trust-building service as indicated in the literature in section 3. In the sample, peer review and reputation systems consisted of points-based systems where peers rated each other based on a scale, written feedback and badges awarded by the platform upon the satisfaction of certain criteria.

Nearly half of the platforms provide information to their peers about applicable **regulation and taxes** (45%) or **advice/rules on safety** (48%). Such information is generally provided in a Help, FAQ or Safety section on the website.

Trust-generating tools such as **identity verification** were only seen in 25% of platforms. Identity verification means user information checks (verified by the user through the platform via a phone number, email address, social media account (e.g. Facebook, Google+, Twitter, LinkedIn), or verification of official identity documents such as passports. Finally, 20% of platforms provide **add-on services** such as promotional listings, invoicing services, professional photos, etc. These services are considered “pre-transaction” services as most of these features are intended to increase the likelihood of concluding transactions and to foster trust between the peers and between the peers and the platform.

¹⁴⁰ According to the platform's T&Cs, for users outside the US the platform may, to the extent permitted by applicable laws and if they have enough information to identify a user, obtain the local version of background or registered offender checks to their sole discretion. See Task 4 case study for further details.

Figure 11 : Pre-transaction services across all five P2P markets



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

Considering the importance of trust building tools in the online P2P markets as shown in section 3, platforms that do not offer peer reviews could have been expected to offer other types of services to compensate for the lack of this trust-building tool. On the contrary, the results of Task 1 show that **platforms that do not offer peer reviews offer less (pre-, during-, and post-) services than all P2P platforms taken together**, or the platforms facilitating peer reviews. This difference is the most striking regarding the provision of terms and conditions for P2P interactions. Only 22% of platforms that do not offer peer reviews provide terms and conditions for the interactions between peers, which is less than all P2P platforms (35%) or platforms that offer reviews (47%).

Results based on each of the five P2P markets, displayed in Figure 12, show significant differences for some services. Notably, the **sharing/hiring rides** market has the most platforms providing information on rules and taxes (52%), advice/rules on safety (68%) and identity verifications (36%), and 60% of these platforms have peer review and reputation systems. An explanation could be that safety concerns are higher in this market because of the higher risk of injuries to both peers.

In contrast, the **sharing/renting goods** market has the least platforms providing such services. Just over half (56%) the platforms provide demand and supply matching services, followed by 39% offering peer review&reputation systems and

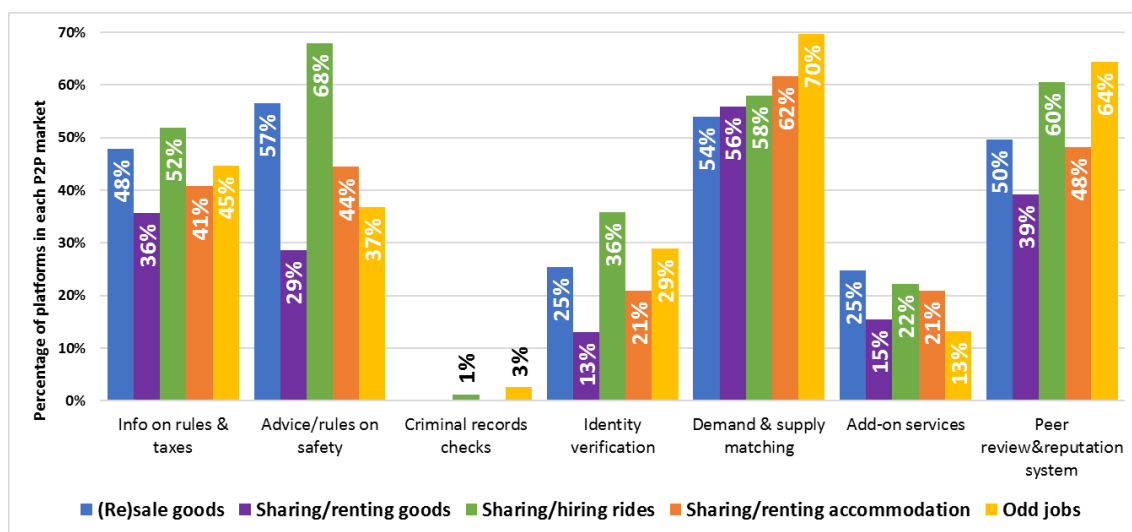
36% information on rules and taxes. In addition, just 13% of platforms conduct identity verification, while only 15% have add-on services.

Out of the five markets analysed, the **odd jobs** market registered the highest number of platforms providing demand and supply matching services (70%). Given the self-regulatory nature of most platforms, well over half include peer review&reputation systems (64%) and nearly half (45%) provide information on rules and taxes. It is important to note that platforms in the odd jobs market registered the lowest levels of add-on services provision among all five markets under study.

In the **sharing/renting accommodation market**, 62% of platforms have demand&supply matching services, 48% include peer review&reputation systems, 44% provide advice/rules on safety and 41% provide information on applicable rules&taxes. The prevalence of identity verification, is low: only 21% of accommodation platforms provide this service.

In the **(re)sale goods** market about half the platforms in the market provide advice/rules on safety (57%), demand&supply matching (54%), peer review&reputation system (50%) and information on applicable rules and taxes (48%). In contrast, 25% provide identity verification services.

Figure 12 : Pre-transaction services, divided by P2P market



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

Demand and supply matching differs between the five P2P markets, ranging from 54% in the (re)sale goods market to 70% in the odd jobs market.

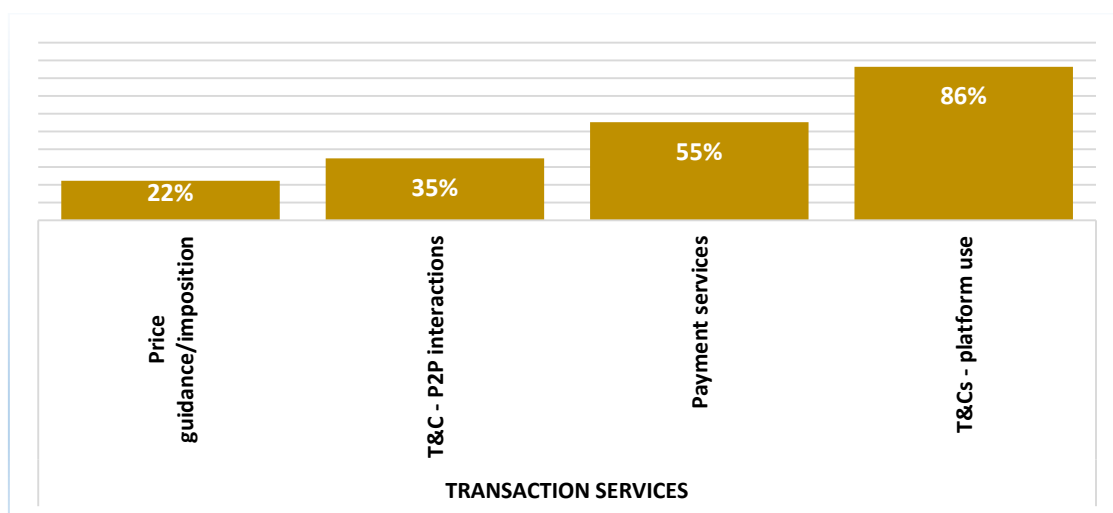
The results presented in this sub-section indicate that there are significant differences in the range of services that platforms provide. Some services like user identity verification or criminal records checks are very rare, while the majority of platforms actively seeks to match supply and demand. There are also significant differences in provision of peer review and reputation systems by platforms..

3.2.3 Transaction services

Transaction services govern the way the transaction occurs. From a consumer policy perspective, it is relevant to identify whether the platforms in the study sample set the rules pertaining to the transactions (terms and conditions), influence prices or facilitate and/or handle payments.

Figure 13 below reports the findings for each transaction service. As illustrated, a vast majority of platforms (86%) provide **T&Cs for the platform use**, while 35% govern the P2P transactions itself through **T&Cs for the transaction between the peers**. 22% of all platforms in the sample suggest or impose prices for the P2P transactions, while slightly over half (55%) facilitate or manage payments.

Figure 13: Transaction services across all five P2P markets



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

When creating an account on a platform this usually requires the user to agree with the platform's **T&Cs for using the platform**, which, in most cases, excludes or severely limits liability of the platform for transactions between the peers (see also Task 4 case studies and the Task 5 report). **T&Cs for P2P interactions**, on the other hand, where they exist, govern the terms of both the interaction and the potential transaction between peers. Both are relevant from a consumer policy perspective: the OECD (2016)¹⁴¹ suggests that fair T&Cs, clarity about responsibility when something goes wrong as well as safe payment services are particularly important for consumers.

Box 3: Examples of Terms & Conditions for platform use and P2P interactions

In general, the **Terms & Conditions** for platform use are relatively standardised with, more or less, the same outline across platforms. These include provisions

¹⁴¹ OECD (2016). Protecting Consumers in Peer Platform Markets: Exploring the issues. OECD Digital Economy Papers (253).

on the limitation of platform liability, data protection or access to formal redress.

A smaller share of platforms also has **Terms&Conditions for peer to peer interactions**. These can be included within the T&C for platform use (such as Manzanasusadas or Okazii), or they can be in a separate document (e.g. the French version of BlaBlaCar). This section consists of conduct guidelines such as provision of accurate information, reliability, liability or cancellation policies. T&Cs may also include details on insurance coverage, the right of withdrawal, formal redress mechanisms, dispute resolution systems, etc.

About a **fifth of platforms recommend or impose prices**. The biggest and most sophisticated platforms recommend prices based on algorithms that calculate a price based on demand and supply data (e.g. AirBnB, UberPop). Other common ways of recommending prices rely on the prices set for similar items (e.g. eBay, MarktPlaats, Yoopies), on calculations based on the peer provider's costs (e.g. BlaBlaCar), or on general guidelines (e.g. Wallapop). Certain platforms, particularly in the odd jobs sector, choose to impose prices for the peer to peer transaction without allowing peers to revise them. This is the case, for instance, for Meploy or TaskRabbit.¹⁴²

Payments are facilitated by 55% P2P platforms in the study sample, and payment methods can range from credit cards to debit cards, PayPal, open invoices, bank transfers, etc. Credit cards are the most widely-used payment services (available on 70% of platforms offering a payment service), followed by debit cards (44%) and PayPal (37%). 44%, or 119 platforms provided other payment method including:

- **Bank transfers:** 40 platforms, or 34%;
- **SMS:** 26 platforms, or 22%;
- **PayPal-like services** (e.g. Paysera, SagePay, Stripe): 24 platforms, or 20%;
- **iDeal:** 12 platforms, or 10%;
- **e-wallet systems:** 12 platforms, or 10%.

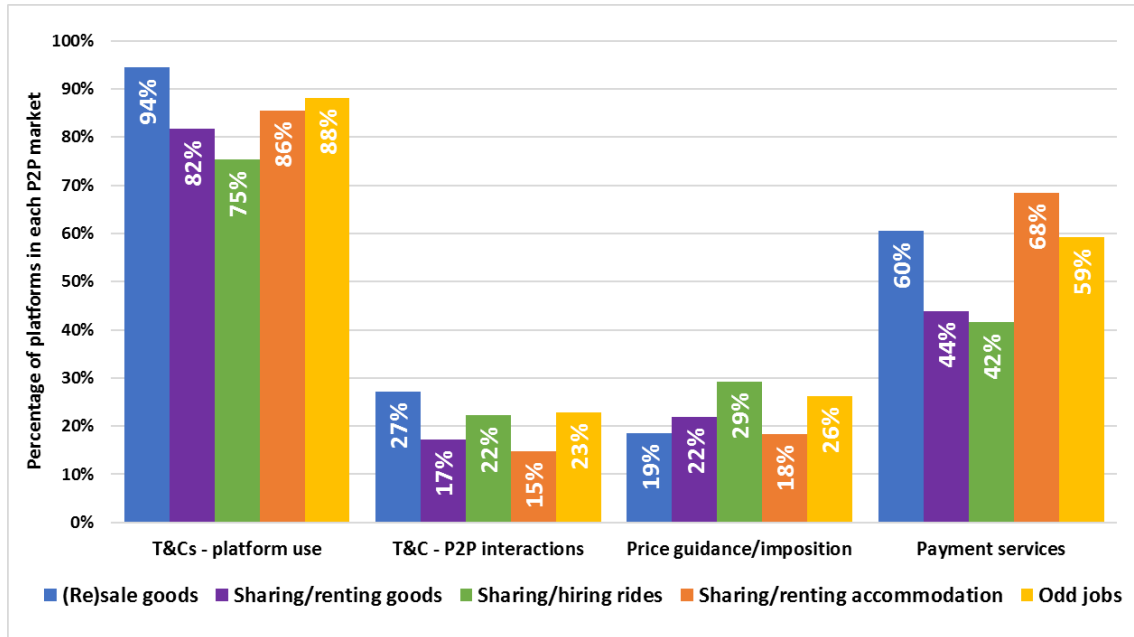
Payment services can also include management of payments by the platform as well as escrow services, meaning that the platform holds the payment from the peer consumer until it is confirmed that the transaction is completed successfully.¹⁴³

Figure 14 disaggregates the results for transaction services for each of the five P2P markets. The results show a higher homogeneity across P2P markets as compared to the pre-transaction services indicated in Figure 12.

¹⁴² The case studies in Task 4 on eBay, AirBnB, EasyCarClub, Wallapop, UberPool and UberPop, Peerby Go, Nimber, Yoopies, Wimdu and BlaBlaCar describe different pricing mechanisms used by platforms.

¹⁴³ This finding results from the case study analysis. Escrow services were not included in Task 1 data collection.

Figure 14: Transaction services, divided by P2P market



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

In the **(re)sale goods** market, nearly all platforms provide T&Cs for platform use (94%) and slightly over a quarter (27%) provide T&Cs for P2P interactions. 60% of platforms in this market include payment services, but only 19% guide/impose prices. As indicated above, the proportion of platforms offering transaction services is similar across all five markets.

In the **sharing/renting goods** market, 82% of platforms include T&Cs for platform use and only 17% T&Cs for P2P interactions. Payment services are offered by 44% of the platforms, whereas only 22% guide/impose prices.

In the **sharing/hiring rides** market 75% of platforms offer T&Cs for platform use (75%). 22% of sharing/hiring rides platforms include T&Cs for P2P interactions, while 29% guide/impose prices and 42% offer payment services.

In the **sharing/renting accommodation** market, a vast majority of platforms offer T&Cs for platform use (86%), while 15% include T&Cs for P2P interactions. Moreover, well over half the platforms operating in this market include payment services (68%), while 18% guide/impose prices.

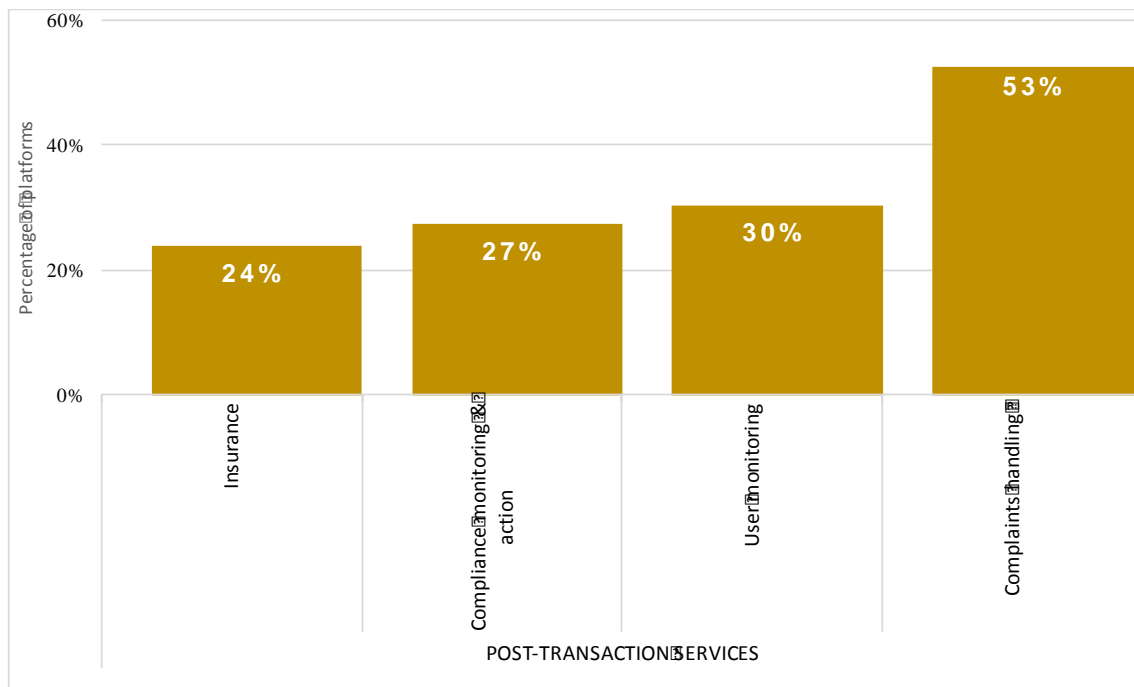
A similar pattern of transaction services provision is observed in the **odd jobs** market, where the vast majority of platforms include T&Cs for platform use (88%), but 23% provide T&Cs for P2P interactions. Just over half of the platforms operating in this market include payment services (59%), while 29% guide/impose prices.

3.2.4 Post-transaction services

Post-transaction services include access to insurance, access to complaints handling and monitoring actions targeted at detecting fraudulent peers and fraudulent transactions.

Figure 15: Post-transaction services across all five P2P markets reports the findings for each post-transaction service. As illustrated, just over half of all platforms **handle complaints** through email, hotline, ticket systems or similar. Nearly a third of all platforms (27%) verify **compliance** of the goods/services listed on the platform with the platforms' or external rules¹⁴⁴ and 30% **monitor their users'** compliance with such rules. In this context, monitoring of listings consists of ad-hoc screening of listings (e.g. OLX Romania). User (peer profiles) monitoring is enforced either through the platforms' staff activity or "flagging" options (e.g. Peerby) whereby users can report potentially fraudulent profiles or peer activities. Furthermore, 24% of platforms provide insurance services either provided in the offer or provided for additional charge.

Figure 15: Post-transaction services across all five P2P markets



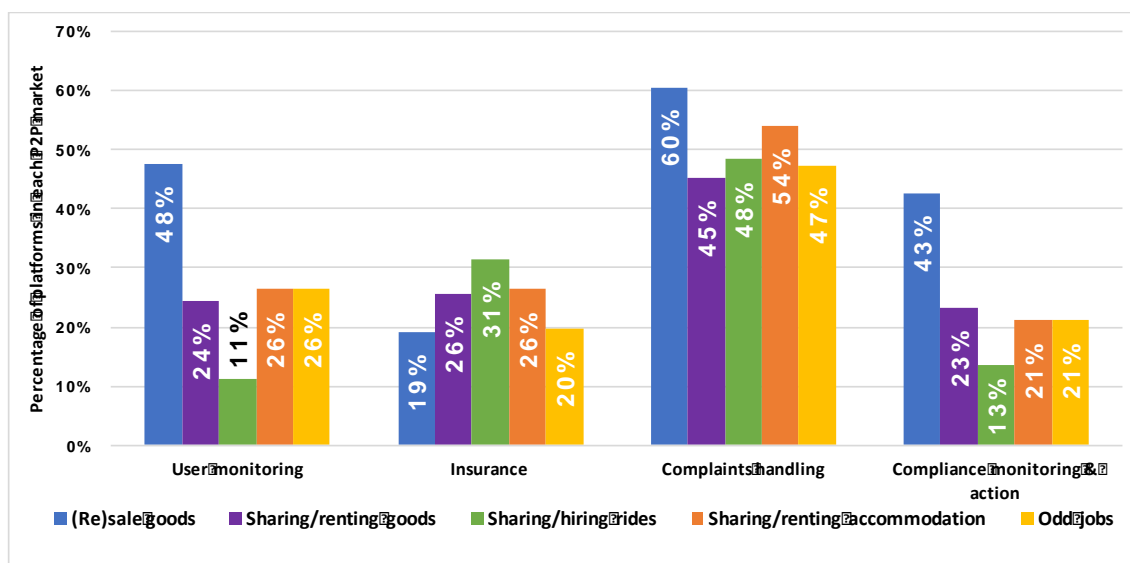
¹⁴⁴ As explained in Table 6 compliance *monitoring and action* includes monitoring of the goods and services listed on the platform and active engagement in detecting and removing those against platform rules.

Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

Figure 16 shows the results for each post-transaction service for the five P2P markets.

The results show that **(re)sale goods** platforms are much more likely to monitor their users (48% of platforms in the market) or listings (43% of platforms), and are more likely to handle complaints (60% of platforms) than platforms in other P2P markets. The (re)sale goods platforms' higher reliance on these tools may help explain their lower use of insurance services: only 19% of (re)sale goods platforms use such tools.

Figure 16: Post-Transaction services, divided by P2P market



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

Platforms in the **sharing/hiring rides market** rely more on insurance (31% of platforms) and complaints handling (48% of platforms), and much less so on monitoring (only 11% of sharing/hiring rides platforms monitor users and only 13% monitor listings). A correlation can be seen with the pre-transaction services analysis (see sub-section 4.2.2), which showed that sharing/hiring rides platforms generally offer a higher number of tools aimed at creating a safe and trustworthy environment before the transaction takes place, through e.g. peer review and reputation systems. This indicates that such platforms tend to rely more on pre-transaction services to ensure peer trust rather than post-transaction services.

Platforms in the **sharing/renting goods, sharing/renting accommodation** and **odd jobs** markets display similar tendencies with respect to post-transaction services. In the **sharing/renting goods** market, 24% of platforms monitor peers, 26% provide insurance services, 45% handle complaints and 23% monitor listings. A similar pattern is seen in the **sharing/renting accommodation** market, where

26% of platforms monitor peers, 26% provide insurance for their services, 54% deal with complaints and 21% monitor listings against rules on the platform . In the **odd jobs market**, 26% of platforms conduct user monitoring, 20% provide insurance for their services, 47% deal with complaints and 21% conduct listings monitoring.

In the **(re)sale goods** market, nearly half the platforms (48%) conduct user monitoring, 19% provide insurance for their services, over half (60%) deal with complaints and 43% monitor listings on the platform.

As for the **sharing/hiring rides** market, almost half of the platforms (48%) handle peer complaints and 31% provide insurance for their services. 13% of platforms monitoring their listings and 11% of platform monitors users.

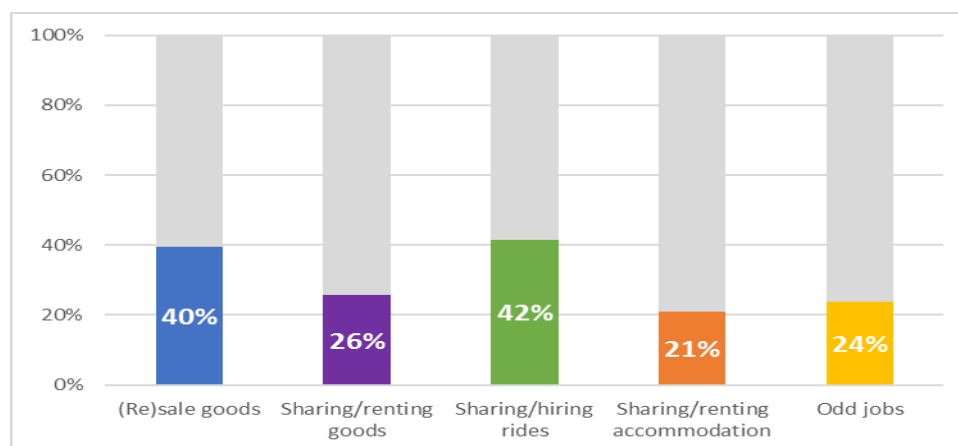
There are ,notable differences across P2P markets. Platforms in the (re)sale goods market often offer complaints handling, but there is less of a focus on insurance. The sharing/hiring rides market focuses on insurance and less on reactive user monitoring.

3.2.5 Channels of service delivery

In addition to the 15 services listed in Table 6, Task 1 also reviewed accessibility on online P2P platforms. As the OECD (2016)¹⁴⁵ points out, when mobile devices are used for e-commerce activities, consumers tend to make more rash decisions and they may fail to understand their rights and obligations.

This study assessed whether the 485 platforms in this study offered mobile access to their services through a mobile app. As Figure 17 shows, the P2P markets with the most platforms with mobile apps are sharing/hiring rides and (re)sale goods, while only about a fifth (21%) of sharing/renting accommodation platforms have such apps. Across the sample, 32% of all P2P platforms have mobile apps.

Figure 17: Availability of mobile apps on P2P platforms, per P2P market

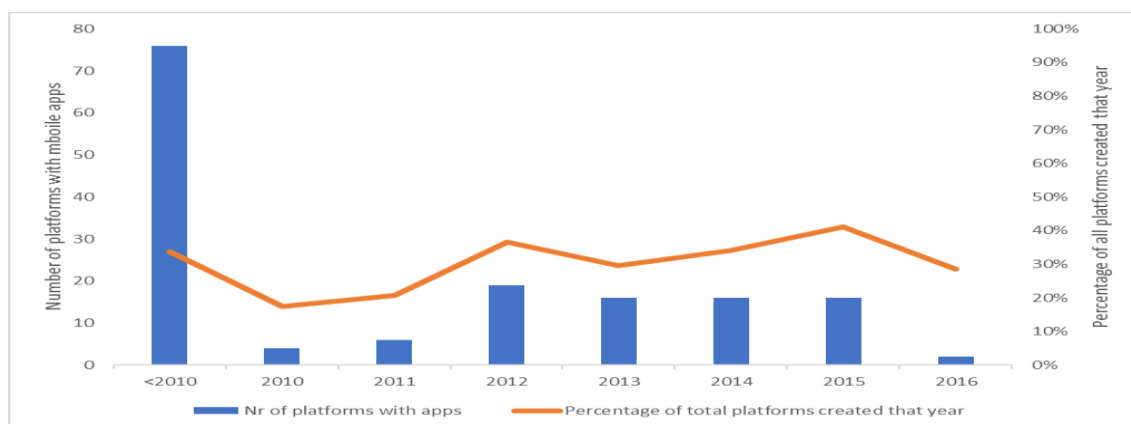


¹⁴⁵ OECD (2016). Consumer Protection in E-Commerce. OECD Recommendation. Available at: <http://www.oecd.org/sti/consumer/ECommerce-Recommendation-2016.pdf>

Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

Overall, as Figure 18 shows, there has been a growing trend between 2010 and 2015 for platforms to provide mobile apps. Although 34% of platforms created before 2010 provide services through mobile apps, this could be due to an adaptation to current market trends, rather than having launched the platform with a mobile app from the start. In the figure below, the small number of platforms created in 2016 (i.e. 7) slightly distorts the results for the year. Nevertheless, percentage-wise, a growing trend can be observed of newer platforms providing more mobile apps year by year.

Figure 18: Trend in number of platforms with mobile apps, expressed as number and as percentage of total platforms created that year, by year



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

The trends described above could indicate that a growing share of P2P transactions occurs via mobile apps, rather than via websites. Indeed, while the dataset collected for this study does not show the percentage of P2P transactions, or spending, that occurs via mobile apps, the trend in the percentage of platforms offering such apps can be linked to broader industry trends. Adobe reports that website traffic in Europe is shifting from desktop to smartphone. While smartphone online visits increased by 126% in the period January 2014 – November 2016, desktop visits dropped by 25%¹⁴⁶. However, Adobe reports that firms are increasingly more focused on retaining existing app users rather than acquiring new ones, given that the trend in new app installations decreased by 5% in France, Germany and UK between January 2014 and November 2016, while the figure is 38% in the USA¹⁴⁷. In the US, while app use is increasing, consumers demand a better experience on apps, which still lags behind the desktop experience. Adobe identified consumer issues in app usage such as small displays, ads, lack of pinch-

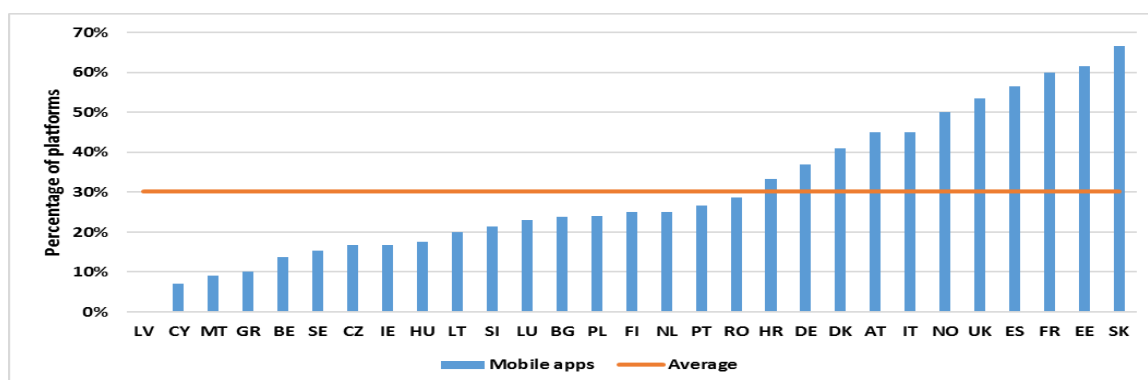
¹⁴⁶ Watt, N. (2017). ADI: Is Europe in the Middle of a Smartphone Divide? Adobe Digital Insights Research. CMO.com. Available at: <http://www.cmo.com/adobe-digital-insights/articles/2017/2/20/adi-is-europe-in-the-middle-of-a-smartphone-divide.html#gs.0QemCns>

¹⁴⁷ Abramovich, G. (2017). ADI: Mobile Landscape a Moving Target. Adobe Digital Insights Research. CMO.com. Available at: <http://www.cmo.com/adobe-digital-insights/articles/2017/2/23/adi-mobile-trends-mwc.html#gs.r9l48SU>

zoom functionality, performance or poor navigation¹⁴⁸. Already in 2007, the OECD raised a number of the privacy and security issues that have arisen in relation to mobile commerce. These included, but were not limited to the impact of location-based services, provision of information on terms and conditions, privacy policies or complaint procedures due to limited capacity of the screens on mobile devices and provision of secure payment scheme, including authentication, to prevent unauthorised use¹⁴⁹.

While it is difficult to draw conclusions at country-level given the limited data available (see sub-section 4.1.3), for indicative purposes Figure 19 illustrates cross-country differences. Note that results should be interpreted with caution: for instance, Latvia (LV) is rated 0%, and the reason is that, of the three Latvian platforms identified in this sample, none provides a mobile app. On the other hand, of the total of 6 Slovak platforms identified, four provide such apps. Thus, sample size has a significant impact on the figure below and this needs to be kept in mind when comparing results across countries. Although no definitive cross-country conclusions can be drawn for this reason, it is nevertheless very likely that there are significant differences in mobile app availability across the countries considered in this study.

Figure 19 : Percentage of P2P platforms with mobile apps, per country



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

To summarise, only a third (32%) of platforms in this study’s sample provide mobile apps: the share of app-accessible platforms ranges from 42% of the sharing/hiring rides platforms to 21% in the sharing/renting accommodation platforms. In addition, this study observed a growing trend for newer platforms to offer mobile app accessibility, even though a significant proportion (34%) of platforms created before 2010. Although no conclusive implications of platform use via apps can be derived from this study’s data, the trends are similar with those observed in Adobe reports on the broader use of smartphone apps: app-based internet navigation tends to rise. However, as indicated by the OECD (2016), app

¹⁴⁸ Abramovich, G. (2017). Study: Smartphone Traffic Grows Fast, But Revenue Still Lags Desktop. Adobe Digital Insights Research. CMO.com. Available at: <http://www.cmo.com/adobe-digital-insights/articles/2016/10/7/adi-mobile-retail-benchmark-2016.html#gs.0pR7NJI>

¹⁴⁹ OECD (2007). Mobile Commerce. OECD Digital Economy Papers No. 124

consumers tend to make more rash decisions and they may fail to understand their rights and obligations. In addition, Adobe reports describe consumer issues like small displays, ads, lack of pinch-zoom functionality, performance or poor navigation.

3.2.6 Summary of findings

Sub-section 4.2 presented the diversity of services that P2P platforms offer their peers by the stage of the P2P transaction in which they occur. A total of 15 services were considered. In addition, the analysis also looked at the prevalence of payment services and five types of payment methods, and at the prevalence of mobile apps.

Some common elements emerge: services like user identity verification (including criminal records checks) are very rare, while the majority of platforms actively seeks to match supply and demand.

The findings highlight the importance of trust-building tools, as suggested in the literature by authors such as Brescia (2016)¹⁵⁰, Slee (2013)¹⁵¹ or Lobel (2016)¹⁵². Unlike conventional businesses that generate trust among consumers via explicitly complying with governmental regulations, platforms must seek other ways as the regulatory framework for consumer protection does not apply to P2P interactions. As evidenced by this study's findings, **there are differences in how platforms in each market ensure trust**. For instance, sharing/hiring rides platforms tend to foster trust in the pre-transaction phase via advice/rules on safety (68%), peer review and reputation systems (60%), information on rules and taxes (52%) or identity verification mechanisms (36%), while relying much less on post-transaction services like user monitoring (11%) or anti-fraud monitoring and action (13%). The opposite strategy is adopted by (re)sale goods platforms.

In addition, P2P markets differ significantly in their provision of **payment services**: the sharing/hiring rides market, like the sharing/renting goods tends to provide fewer payment services than the other three markets in the study. Overall, peers are mostly offered credit cards payments, although 44% of all platforms provide debit card payments and "other" payment types (especially bank transfers or SMS payments). Differences are noted particularly in the use of PayPal or debit cards.

In **post-transaction services**: while sharing/hiring rides market are more likely to offer insurance, (re)sale goods platforms engage more in monitoring of user behaviour.

In addition, differences are observed in the availability of mobile apps: they are frequently (42%) used by sharing/hiring rides platforms and (re)sale platforms (40%), but also by about a quarter (20%) of sharing/renting accommodation platforms.

¹⁵⁰ Brescia, R. (2016). *Regulating the Sharing Economy: New and Old Insights into an Oversight Regime for the Peer-to-Peer Economy*. Nebraska Law Review, Vol. 95, No. 1, p. 87 (2016). Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2728900

¹⁵¹ Slee, T. (2013). Some obvious things about internet reputation systems. Available at: <http://tomslee.net/2013/09/some-obvious-things-about-internet-reputation-systems.html>

¹⁵² Lobel, O. (2016). The Law of the Platform. Univ. of San Diego, Legal Studies Research Paper Series, Mar. 2016, available at <http://ssrn.com/abstract=2742380>.

Finally, findings indicate a growing trend in newer platforms to offer their users app-based accessibility. The largest share of platforms offering mobile apps is seen in the sharing/hiring rides market (42%), while the lowest is seen in the sharing/renting accommodation market (21%). The rising popularity of mobile apps can pose new problems for consumers, such as rash decisions, poor functionality, access to information due to limited screen capacity or invasive advertising.

3.3 P2P platform monetisation models

This sub-section complements the overview of platforms services in sub-section 4.2 by empirically describing the way platforms capture monetary value from P2P transactions. In line with the Task 1 objectives (sub-section 2.1), the analysis of monetisation models contributes to the conceptualisation of P2P platform business models later on in sub-section 4.5.

As described in sub-section 3.4, researchers have identified several monetisation models for P2P platforms: fee-based systems as suggested by Evans (2008)¹⁵³, data-based systems suggested by Martens (2016)¹⁵⁴, or flow-based systems as described by Choudary (2015)¹⁵⁵. This sub-section builds on such findings, and considers the following monetisation models:

- **Transaction fees:** fees levied on transactions intermediated by the P2P platform, from either peer consumers or peer providers;
- **Subscription fees:** fees charged on a periodical basis by the platform on its peers to continue providing its services;
- **Add-on services fees:** fees charged by platforms for add-on services to the transaction itself, such as promoted listings, professional photos, promotion features for listings, options to further verify identity, delivery, insurance, etc.;
- **Advertising:** revenue generated through advertising third-party content on the platform through banners, native advertising, etc.;
- **Data use/reuse:** revenue generated through sharing or selling peer data to third parties¹⁵⁶;
- **Other:** other revenue generation such as fines (cancellation fees), consumer hotline fees, vouchers, B2B services, etc.

Figure 20 below illustrates the spread of the six monetisation models across the sample of 485 P2P platforms. As the figure suggests, advertising is by far the most popular model, followed by data use/reuse. A third of platforms use transaction fees, while subscription fees, add-on services fees and other models are less common.

¹⁵³ Evans, D.S. (2008). How catalysts ignite: the economics of platform-based start-ups. Available at:

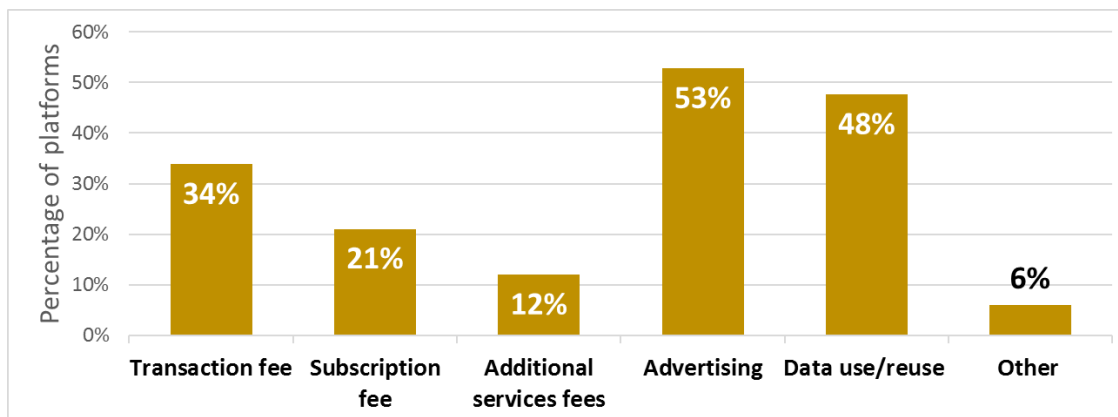
<http://www.marketplatforms.com/wp-content/uploads/Downloads/How-Catalysts-Ignite-The-Economics-of-Platform-Based-Start-Ups.pdf>

¹⁵⁴ Martens, B. (2016). An Economic Policy Perspective on Online Platforms. Digital Economy Working Paper 2016/05. JRC Technical Reports.

¹⁵⁵ Choudary, S.P. (2015). Platform scale: How an emerging business model helps startups build large empires with minimum investment. Platform Thinking labs Pte. Ltd

¹⁵⁶ Note that this study considers a platform uses data as a revenue source if its Terms and Conditions specify that it is allowed to share peer data with third parties for, among others, marketing purposes. It is not clear which platforms actually gain monetary value from peer data, but this study considers that all platforms which enable themselves to use peer data in this way in their Terms and Conditions end up doing so.

Figure 20 : Monetisation models of P2P platforms for all five P2P markets



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

While Figure 20 above provides an indication of the prevalence of the basic monetisation models used, it does not take into account combinations of monetisation models. Indeed, a considerable number of platforms use a combination of strategies to generate value for peers and revenue for the platform. Combinations of monetisation models are displayed in Table 8 below. As illustrated, over half of the platforms use advertising in combination with subscription fees (51%), add-on service fees (61%) or data use/reuse (64%).

Data use/reuse is also usually combined with a second monetisation model: around half of platforms using this model use other models.

Table 8: Combination of monetisation models¹⁵⁷

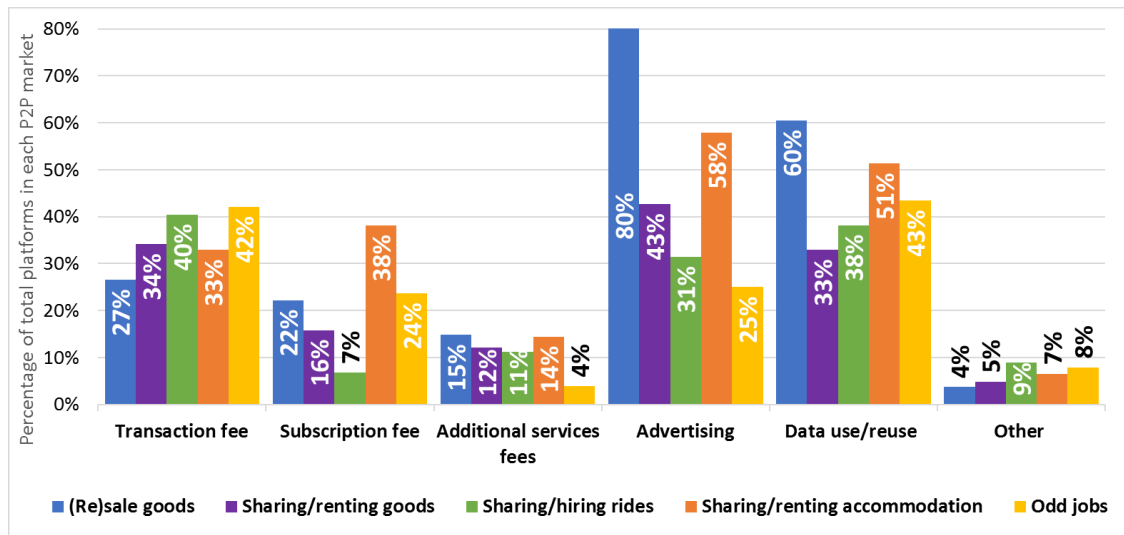
	Transaction fee	Subscription fee	Add-on service fees	Advertising	Data use/reuse	Other
Transaction fee		15%	10%	32%	51%	6%
Subscription fee	23%		11%	51%	47%	9%
Add-on service fees	28%	19%		61%	49%	9%
Advertising	20%	20%	14%		57%	4%
Data use/reuse	35%	20%	12%	64%		6%
Other	31%	31%	17%	38%	48%	

Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

¹⁵⁷ The percentages should be interpreted as: The percentage of platforms using the monetisation model on the vertical axis which also use the monetisation model on the horizontal axis.

Figure 21 shows large differences between sectors in their use of monetisation models. While differences are minimal in “other” and add-on services fees models, they are large for models such as advertising or data use/reuse: (re)sale goods platforms tend to overwhelmingly use such monetisation models, while advertising is only present in one fourth of odd jobs platforms and one third of sharing/renting goods platforms.

Figure 21 : Monetisation models of P2P platforms, per P2P market



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

There is most homogeneity in the **(re)sale goods** market concerning the monetisation models used, while platforms in the **sharing/hiring rides** market are spread between transaction fees (40% of market platforms), advertising (31%), or data use/reuse (38%) with 27% of them using other monetisation models.

A certain heterogeneity is also seen in the **sharing/renting accommodation** platforms, where the most popular monetisation models are still advertising and data use/reuse.

To summarise, the platforms in this study’s sample tend to use three main types of monetisation models, often in combination with one another: advertising, data use/reuse and transaction fees. Advertising and data use/reuse are often used in combination with other monetisation models. Across P2P markets, significant differences arise: (re)sale goods platforms tend to be more homogeneous and mostly use advertising (80% of market platforms) or data use/reuse (60%). The sharing/hiring rides market features the greatest diversity of monetisation models, while the remaining three P2P markets display moderate levels of heterogeneity.

3.4 Data and data protection

This sub-section briefly presents findings related to data use/reuse, given the strong consumer protection implications of data privacy and the potential role of data use in the platform economy. The information presented here is partly based

on the empirical analysis of the 485 platforms, as well as on input from the Task 4 case studies.

There are a number of potential **data protection concerns** regarding the process by which information on people's personal habits, behaviours, plans, services or products they purchase, as well as contacts/friends is used currently by platforms or might be used in the future (for example, data used to determine dynamic pricing). As pointed out by the OECD Paper on Protecting consumers in peer platform markets,¹⁵⁸ a lack of data sharing policy information is combined with the risk of data breaches that can affect peers' personal information. BEUC also underlines the risk of worsening problems associated with online tracking by the fact that some platform apps (such as Uber) track user location even when the app is closed.¹⁵⁹

Platforms that hold extensive data on providers and consumers may have the technical capacity not only for dynamic pricing in function of both supply and demand but also for selective matching of peer consumers and providers, in terms of the type of product service and/or prices. Such practices could lead to consumer discrimination, as underlined by a European Parliament study¹⁶⁰, as well as other studies, especially for (re)sale platforms.^{161,162}

P2P platforms collect different types of data at various stages of the platforms' use by peers. For example, Uber may collect data of its app user about:

- **location information** (the precise location data for each trip) and what people do afterwards;
- **contact information** stored on the peer consumer's device – if the peer consumer allows the Uber app to access his address book;
- **transaction information** (i.e. transaction details related to the use of Uber, including the type of service requested, date and time the service was provided, amount charged, distance travelled, and other related transaction details);
- **usage and preference information** (e.g. through cookies and pixel tags);
- **call and SMS data** (including date and time of the call or SMS between the customer and the driver, the parties' phone numbers, and the content of the SMS);
- **log information** (e.g. IP address, access dates and times, app features or pages viewed, app crashes and other system activity, type of browser, etc.).¹⁶³

¹⁵⁸ OECD (2016). Protecting Consumers in Peer Platform Markets: Exploring the issues. OECD Digital Economy Papers (253).

¹⁵⁹ BEUC (2016). Position Paper on the collaborative economy. Available at: http://www.beuc.eu/publications/beuc-x-2016-030_gbe_collaborative_economy_beuc_position.pdf

¹⁶⁰ European Parliament (2013). Discrimination of Consumers in the Digital Single Market. Internal Market and Consumer Protection Committee, p. 15.

¹⁶¹ Ursu, R. M. (2015). The power of rankings: Quantifying the effects of rankings on online consumer search and choice. Available at: http://www.law.northwestern.edu/research-faculty/searlecenter/events/internet/documents/Ursu-Ranking_v2.pdf

¹⁶² Ghose, A., Ipeirotis, P., Beibei, L. (2012). Examining the Impact of Search Engine Ranking and Personalization on Consumer Behavior: Combining Bayesian Modeling with Randomized Field Experiments. Available at: http://www.ipeirotis.com/wp-content/uploads/2012/01/wise2011_SearchDesign.pdf

¹⁶³ Uber case study report, section 2.3.3.

P2P platforms **use the data they collect themselves** for several purposes. The Task 4 analysis of the 10 case study platforms' privacy policies identified the following uses:

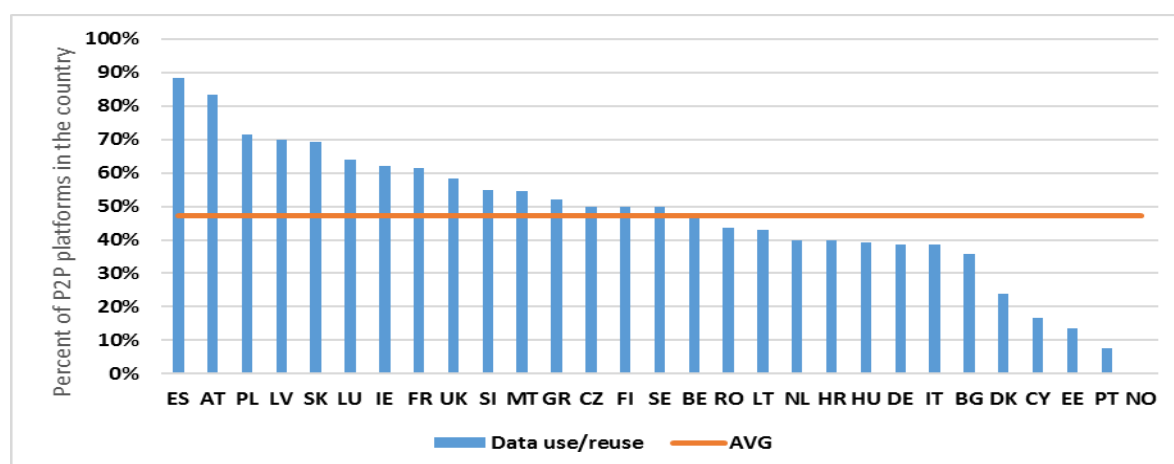
- Develop new products or services in line with user interest;
- set/recommend prices in function of demand and supply;
- complaint handling and conflict resolution;
- Target personalised advertising/marketing;
- Detect and prevent fraudulent activities;
- Verification of identity by third parties; and
- Transfer of data to authorities for regulatory purposes.

Data use and reuse is the platform's second most popular monetisation strategy, after advertising. 48% of the 485 platforms analysed for this study use data to earn revenue as part of their monetisation strategy. They do so by selling data to third parties for marketing purposes. The percentage was calculated by counting the platforms that either specify that they share user data with third parties, or which do not explicitly mention that they do not share such data with third parties.

60% of the platforms screened in the Re(Sale) goods market may resell, and thus monetise on user data. The percentages for other markets are as follows: sharing/renting accommodation (51%), odd jobs (43%), sharing/hiring rides (38%) and renting/sharing goods (33%).

Data use and reuse by P2P platforms varies between countries. Hungary, Slovakia, Romania and Austria-based platforms use and reuse data the most with respectively 88%, 83%, 71% and 70% across sector. On the other hand, in Ireland, Denmark and Germany, less than 10% of platforms use and reuse data, and none of them do in Latvia.

Figure 22: Platforms use and reuse of data across countries (485 platforms, 28 EU Member States + Norway)



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

This difference in data use and reuse as a revenue source between countries may be explained by the diversity of regulatory regimes for data protection, its enforcement or other national factors.¹⁶⁴ The validity of the data depends on the number of platforms by country, in particular for countries with a small number of platforms. In Latvia, for instance, only three platforms were screened, as opposed to 31 in Belgium.

To conclude, P2P platforms rely extensively on the collection, use and sharing and of data to develop and provide their services, and on the resale of data as a source of revenue.

A lack of transparency over these practices, especially data transfers to third parties, could entail major issues for consumers. In particular, as confirmed by the results in Task 4, there is often confusion regarding the way platforms use peer data. Information to users about data use and reuse is often spread between different sections of the platforms' website/app, and comprehensive information is not always available. As regards clarity, the presence of most information in the T&Cs can be an issue as they are not always easily understandable to peers.

3.5 P2P platform business models

This sub-section links the P2P platform services indicated in sub-section 4.2 with the monetisation models in sub-section 4.3 to derive conceptual business models for P2P platforms, in line with the Task 1 objectives indicated in sub-section 2.1. Note that the definition of business models is subject to the limitations presented in sub-section 4.1.3.

To the extent possible, based on the quantitative data collected, the business models are based on observed correlations between monetisation models and platform services, but such correlations have not been statistically tested. The insights presented here are combined with the qualitative results of Task 4 to develop a business model typology for online P2P platforms in the Final Report of this study.

When interpreting the business models identified in this section, it is important to acknowledge, as illustrated for example by Ben Rossi (2015)¹⁶⁵ or on the GrowthHackers platform¹⁶⁶, that platforms change their service offer and monetisation model as they evolve. P2P This means that P2P platforms can shift from one to another type of business model identified here, or provide services that coincide with more than one type of business model. The typology of business models, however, aims to provide a theoretical framework for interpreting how P2P platforms operate.

Business models are defined in this study as **the way in which the value of platform services to peers is monetised by the platform**. A two step-analysis was undertaken:

¹⁶⁴ European Commission (2016). How will the EU's data protection reform strengthen the internal market? . Available at: http://ec.europa.eu/justice/data-protection/files/4_strengthnen_2016_en.pdf

¹⁶⁵ Information Age (2015). The Evolution of the Sharing Economy. Available at: <http://www.information-age.com/evolution-sharing-economy-123460199/>

¹⁶⁶ GrowthHackers (2016). Growth studies. Available at: <https://growthhackers.com/growth-studies>

- Implications of each monetisation model for type of service provided by the platforms (Table 9), and
- Implications of each service provided by the platforms for each monetisation model (Table 10).

Table 9 displays how each type of service offered by platforms as presented in section 4.2 is monetised, using the five main monetisation models identified in section 4.3. Figures over 50% are highlighted.

Table 9: Types of services offered by five monetisation models¹⁶⁷

Transaction stage	Service	% of platforms combining service with monetisation strategy				
		Transaction fee	Subscription fee	Advertising	Data use/reuse	Add-on service fees
Pre-transaction	Criminal records check	1%	0%	0%	0%	0%
	Add-on services	27%	27%	65%	39%	59%
	Identity verification	53%	23%	52%	11%	51%
	Info on rules & taxes	44%	21%	55%	11%	62%
	Advice/rules on safety	38%	24%	53%	13%	49%
	Peer review & reputation systems	47%	22%	49%	13%	52%
	Demand & supply matching	34%	21%	53%	13%	51%
Transaction	Price guidance/imposition	43%	30%	47%	20%	49%
	T&C - P2P interactions	44%	24%	46%	11%	52%
	Payment services	51%	27%	48%	14%	50%
	T&C – platform use	36%	22%	54%	12%	53%
Post-transaction	Insurance	66%	23%	42%	16%	43%
	Compliance monitoring & action	32%	16%	73%	13%	57%

¹⁶⁷ The figures should be read as: X% of platforms providing the certain service monetise their value to peers through monetisation model Y.

Transacti on stage	Service	% of platforms combining service with monetisation strategy				
		Transacti on fee	Subscripti on fee	Advertisi ng	Data use/reu se	Add- on servic e fees
	User monitoring	35%	22%	72%	16%	62%
	Complaints handling	38%	24%	55%	14%	53%

Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

The table illustrates that **add-on service fees** and **advertising** are used regardless of the type of service the platform provides. However, platforms that gain revenues through advertisements focus their services on compliance monitoring (73% of platforms that offer this service also have advertisements), user monitoring (72%) and add-on services (65%). As indicated in Table 8 in sub-section 4.3, advertising and **data use/reuse** are often used in combination with other monetisation models. Data use/reuse is most often used when the platform provides add-on services (39% of platforms that provide add-on services (re)use data).

Table 9 above provides initial insights into how certain services tend to be monetised. From Table 9, as well as drawing on insights from Table 8 in sub-section 4.3, the following observations can be made:

- **Advertising** and **add-on service fees** are across the platform sample almost irrespective of the type of services that the platform provides. There is a tendency, however, for platforms providing compliance and user monitoring, as well as add-on services, to use advertising.
- **Advertising** is mostly used in combination with another monetisation model.
- **Data use/reuse** is mostly used in combination with another monetisation model, and very rarely by itself (only 20 platforms in the entire sample solely rely on data use/reuse). Data use/reuse is most prevalent among platforms that offer add-on services.
- **Transaction fees** are mostly used in cases where platforms provide insurance (66% of platforms that provide insurance charge transaction fees), identity verification (53%) and payment services (51%). They are most often combined with data use/reuse (35% of platforms charging transaction fees also (re)use data) and “other” monetisation models (31%).
- **Subscription fees** tend to be used more when platforms suggest/impose prices (30% of platforms suggesting/imposing prices use subscription fees), when payment services are available (27%), and when add-on services are provided (27%).

Based on these insights, it is clear that there is no discernible pattern in platforms using add-on service fees. Considering that most platforms combine advertising with data use/reuse (see Table 8), the two monetisation models can be combined.

This results in three main types of monetisation models, based on transaction fees, subscription fees and advertising/data.

To identify the specific features of each of the three monetisation models, Table 10 below uses as denominator the number of platforms using each monetisation model, rather than the number of platforms providing each service, as is done in Table 9 above. This different interpretation of the service-monetisation model correlation contributes to a better understanding how platforms bundle the services in each monetisation model. The way services are grouped under each monetisation model (rather than the way each monetisation model is present for a certain service, as in Table 9 above) defines the characteristics of each monetisation model.

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Table 10 : Types of services offered by three types of monetisation models ¹⁶⁸

Monetisation model/service	Pre-transaction							Transaction				Post-transaction			
	Criminal records check	Add-on services	Identity verification	Information rules & taxes	Advice/rules on safety	Peer review & reputation system	Demand & supply matching	Price guidance/imp position	T&C - P2P interactions	Payment services	T&C - platform use	Insurance	Compliance monitoring & action	User monitoring	Complaints handling
Transaction fee	2%	16%	38%	58%	55%	72%	59%	28%	46%	84%	91%	46%	26%	31%	59%
Subscription fee	0%	25%	27%	45%	55%	55%	58%	31%	40%	72%	89%	25%	21%	31%	60%
Advertising – Data use/reuse ¹⁶⁹	0%	25%	24-26%	46-58%	48-50%	48-56%	59-62%	20-23%	30-38%	50-58%	88-96%	19-21%	32-38%	39-41%	54-58%

Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

168 The figures should be read as: X% of platforms using the certain monetisation model provide service Y.

169 The figures for advertising and data use/reuse were combined, and converted into ranges where they were not identical.

According to the findings presented in Table 10 above, the following conclusions can be drawn:

- **Platforms using transaction fee-based models** offer a large part of the entire service range under study. Platforms using this model tend to offer as many services as possible, as often as possible to encourage a maximum number of transactions. This could indicate that these platforms are likely to be mature enough and financially-solid enough to afford a wide range of services. Such platforms focus on transaction and pre-transaction-specific services (payment services, T&Cs for P2P interactions, peer review and reputation systems, info on rules & taxes) more than platforms using other monetisation models.
- **Platforms using subscription fee-based models** display certain characteristics of transaction fee-based models but they concentrate their service offer on advice/rules on safety, add-on services, price guidance/imposition, payment services and handling complaints. Few such platforms monitor compliance or provide insurance.
- **Platforms using advertising/data-based models** put more emphasis on post-transaction services. Such models stand out in monitoring efforts and they are mostly concerned with ensuring that information is accurate (avoiding fraud and handling complaints when problems occur), ensuring users respect the platform's rules for information exchange (T&Cs) and monitoring their activity to foster trust and thus boost information exchange between peers. Very few such platforms provide insurance, are involved in pricing or govern P2P interactions. This indicates that such platforms focus less on trust-building, but adopt a more reactive approach to consumer issues.

To summarise, three main monetisation models can be identified: transaction fee-based, subscription fee-based and advertising/data (re)use-based. For each type of monetisation model, platforms tend to focus their service offering on different stages of the transaction: transaction fee-based models focus on transaction and pre-transaction services, subscription fee-based models focus on pre-transaction services, while advertising/data re(use)-based models are more likely than the others to focus on post-transaction services.

These findings on monetisation models are combined with qualitative insights of findings in Task 4 to draw up a typology of business models of P2P platforms in the Final Report of this study.

3.6 Summary of findings

Section 4 is based on the academic insights presented in section 3 and the empirical research of P2P platform services and monetisation models. The results are used to classify services according to their role in transactions into three groups:

- **Pre-transaction services**, which facilitate the matching of supply and demand and build trust so as to maximise the number of P2P transaction on the platform.

- **Transaction services**, which set conditions for transactions on the platform, including payments.
- **Post-transaction services**, which address potential problems with P2P transactions, including complaints handling, insurance, and monitoring of compliance of listings and user behaviour with platform or external rules.

The analysis of monetisation models in this section shows that there are three main types of monetisation strategies employed by platforms: transaction fee-based, subscription fee-based and advertising/data-based. Advertising and data (re)use models are grouped together as they tend to be used simultaneously. Add-on service fees, are common to all platforms regardless of the types of services offered.

Cross-sector differences exist in the use of monetisation models, even though advertising and data (re)use are prevalent across sectors. Reliance on advertising ranges from 80% for (re)sale goods platforms to 25% of platforms in the odd jobs sector. Data (re)use is common for 60% of (re)sale platforms and only 33% of sharing/renting goods platforms. Transaction fees are used by 40% of sharing/hiring rides platforms but only by 27% of (re)sale goods platforms, while subscription fees are used by 38% sharing/renting accommodation but only by 7% of sharing/hiring rides platforms.

Transaction fee-based models concentrate their service offering in the transaction and pre-transaction phase, subscription fee-based platforms tend to focus on pre-transaction services, while advertising/data (re)use-based platforms rely on post-transaction services more than the other two models. The results suggest that transaction fees are the main monetisation strategy of for-profit platforms: platforms aim to maximise the number of transactions (and thus platform revenue) by fostering trust among their users.

Finally, it is important to note that P2P platforms rely extensively on data collection both for their service provision, as well as to generate revenue. Lack of transparency about how data is used could entail privacy issues for consumers

4 Economic significance of P2P transactions

This section addresses one of the two main objectives of this study, as described in sub-section 2.1, which is to estimate the economic significance of P2P transactions in the EU. In doing so, it complements current academic and policy literature (see sub-section 3.6) that used different methods to achieve the same objective.

As made clear in the terms of reference of the study, the aim of this section is not to provide a full economic assessment and analysis of P2P markets (volume, value, growth potential, impact on traditional industries/services) or an economic impact analysis. Nevertheless, based on data from this Task's desk research as well as Task 2 survey data, it is possible to estimate the size of the five P2P markets considered.

To reach its objective in a clear and concise manner, this section is divided as follows: sub-section 5.1 provides the methodology and limitations of the economic modelling used in this study. Sub-section 0 maps the development of P2P platforms in the EU28 and Norway over time. The sub—section also evaluates the popularity and financial standing of platforms. The economic modelling starts with sub-section 5.3, which identifies peer participation rates, while describing the popularity of the platforms in the sample. Sub-section 0 is the core of the economic model, and estimates the total peer expenditure, peer revenues and non-peer revenues in P2P transactions in the EU. Sub-section 0 summarises the results.

4.1 Methodology to estimate economic importance

The EU-level estimates of peer expenditure and peer revenues are calculated on the basis of the Task 2 consumer survey run in 10 MS by sector of activity. The survey targeted consumers; respondents were not asked to declare if they were professional and non-professional peer providers.

The method for estimating total expenditure and revenue used in this study relies on the median peer expenditure/revenue in each of the five economic sectors considered. This is because the data point values on expenditure and revenues in the survey sample vary significantly. In the case of such skewed distributions the median value is a better measure of the overall tendency than the mean. The median represents the value that splits the sample into two equal halves: 50% of peer consumers spend less than the median and 50% of peer consumers spend more than the median. Thus, the median provides a more conservative estimate of the results.

The average and median values indicated in this report refer to total revenues/expenditures per sector by active users over the past 12 months. They do not distinguish between expenditure on individual platforms.

For each economic sector, the total peer expenditure is calculated using the following formula. The same formula is applied for peer revenues:

$$SEC(Exp_{total}) = MS(Int_{users}) * Exp_{peer} * Tot(P2P_{users}) * SEC(P2P_{consumers})$$

- $SEC(Exp_{total})$ = the total peer expenditure in the given sector;

- $MS(Int_{users})$ = the total number of internet users in the EU, based on the EUROSTAT data taken from the European Commission's (2015) Digital Single Market report;
- Exp_{peer} = the median peer expenditure recorded in the 10 MS in which the survey ran;
- $Tot(P2P_{users})$ = the percentage of total active respondents engaged in P2P transactions, based on the 10 MS in which the survey ran. The percentage is 65.41%;
- $SEC(P2P_{consumers})$ = the percentage of peer consumers in each sector under study, out of the total number of active users of P2P platforms ($Tot(P2P_{users})$).

The EU-level estimate for total peer expenditure is compiled by summing up each sector's estimated peer expenditure. The same approach is carried out for estimating the EU-level total peer revenues.

Box 4: Methodological limitations

There are several limitations with the models used to calculate economic significance of P2P markets.

First, the values indicated in this section are estimates based on the consumer survey conducted in 10 MS on internet users age 18 and above as part of this study. The results recorded in the 10 MS have been extrapolated to the EU as a whole. The selection of 10 EU MS includes six EU MS where P2P transactions have reached a certain critical mass, and/or where relevant research has been or is being conducted¹⁷⁰. In addition, four additional EU MS¹⁷¹ were chosen given their high potential for collaborative economy initiatives¹⁷² and available international surveys¹⁷³ on the topic. Note that internet penetration in four of the MS (Italy, Spain, Bulgaria and Poland) is lower than the EU average (44%, 56%, 53% and 57%, respectively). The extrapolation is likely to lead to a loss of accuracy for the EU-level estimate.

Second, only EU citizens aged 18 or over were considered for estimating the EU population, and EU citizens aged 16-74 for the incidence of internet use. The statistics were derived from EUROSTAT and the European Commission's (2015) Digital Single Market report. However, even though most platforms do not allow it, peers younger than 16 (or 18, depending on the platform) could be actively engaged in P2P transactions¹⁷⁴. This study does not account for them.

Third, this study relies on median, rather than average values for peer revenues and peer expenditure to calculate a EU-level estimate for peer revenues and expenditure. The median was chosen due to the large skewedness in the sample distribution for both peer revenues and peer expenditure, and in line with the methodology adopted by previous studies in the field. Even though, as per best practices, the median is the most adequate measurement of a typical peer's expenditure or revenue, the extrapolation of this estimate at EU-level has the potential to diminish the data reliability.

Fourth, this study interprets as "peer expenditure" and "peer revenue" what respondents reported to have spent or received via a specific platform over the preceding 12 month period as the total expenditure/revenue attributable to peers in one of each of the five markets under study. An alternative calculation could have been to interpret peer expenditure/revenue as the average or

¹⁷⁰ Netherlands, UK, Denmark, Spain, France, Germany

¹⁷¹ Bulgaria, Italy, Poland, Slovenia

¹⁷² According to The Nielsen Global Survey of Share Communities (2014). The study was conducted between August 14 and September 6, 2013, and polled more than 30,000 on-line consumers in 60 countries throughout Asia-Pacific, Europe, Latin America, the Middle East, Africa and North America.

¹⁷³ ING International Survey (2015). What's mine is yours – for a price. This survey was conducted between 16 January and 2 February 2015 using internet-based polling. In total 15 countries (Austria, Belgium, Czech Republic, France, Germany, Italy, Luxembourg, Netherlands, Poland, Romania, Spain, United Kingdom plus Turkey, USA and Australia) were polled with a total sample size of 14,829.

¹⁷⁴ <http://blog.mila.com/en/2015/06/12/why-the-on-demand-economy-will-continue-to-rise/>

median expenditure/revenue of that peer in each market. Therefore, according to the method adopted in this study, if a peer spent EUR 100 in the (re)sale goods sector, made up of EUR 75 on platform A and EUR 25 on platform B, the peer's expenditure in the (re)sale sector is EUR 100. Alternatively, one could have averaged the amounts spent on each platform to arrive at a EUR 50 estimate. The estimation method has the potential to significantly impact the EU-level estimate for both peer expenditure and peer revenue.

Fifth, it is possible that respondents may have interpreted the question about "money received through the platform" differently. In particular, some peer providers may have deducted costs from the money they report to have "received through the platform", thus reporting only real or net earnings. Such costs may be higher or lower depending on the sector, or the type service provided. For instance, in the case of the sharing/hiring rides sector, some peer providers may deduct fuel costs or in the accommodation sector cleaning costs. In the (re) sale of goods sector peer providers may have deducted delivery costs. In the case of the sharing/hiring of rides costs may vary between car-sharing, ride hiring and ride-sharing platforms¹⁷⁵

4.2 Development of platforms in the EU

This sub-section presents key data about the 485 P2P platforms identified in the sample, and aims to trace the development of the (re)sale of goods and collaborative P2P markets in the EU and Norway.

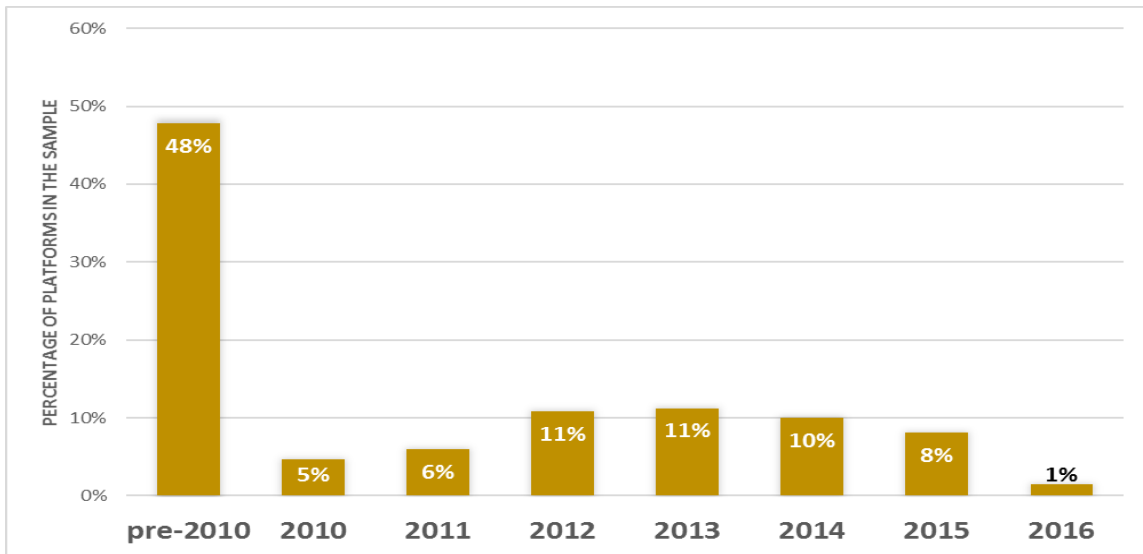
This sub-section describes three types of data of the P2P platforms identified in this dataset:

- **Year of establishment**, to map the evolution of the five P2P markets over time,
- **Platform popularity** based on internet user metrics, to identify differences in usage between sectors, and
- **Financial standing** based on available sources, to give an indication on platform earnings.

First, Figure 23 below maps the **year of establishment** of platforms. Findings show that 48% of platforms in the sample were created before 2010, and 52% in or after 2010.

¹⁷⁵ Car-sharing platforms allow peers to lend cars to other peers (e.g. HiyaCar, EasyCar Club), while ride-sharing platforms allow peers to share the same ride between them (e.g. BlaBlaCar, UberPop, etc). On **car-sharing platforms** like Easycar, the money received by peer providers excludes fuel consumption, which is directly paid by the peer consumer who uses the car. On **ride-sharing platforms** that act on a cost sharing basis, such as BlaBlaCar, the money received by peer providers is a capped percentage of the estimated cost of the trip. On **ride-hiring** platforms like Uber, the money received by the peer provider is assumed to cover part of the car's running costs (e.g. fuel, insurance) as well as to compensate for the drivers' time.

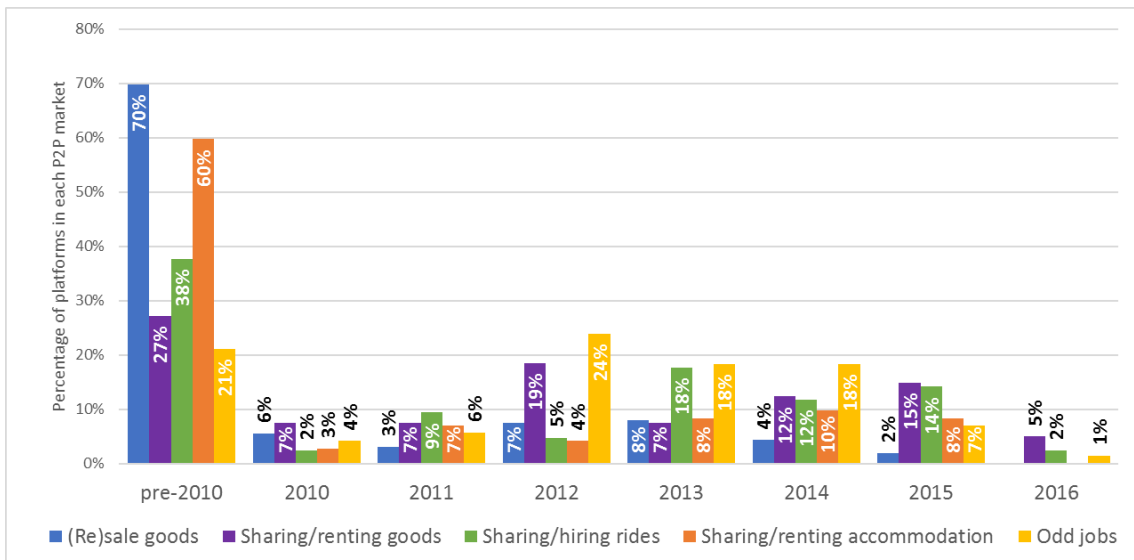
Figure 23 : Platform year of establishment



Source: Data collected from the websites of 485 sharing platforms from March to December 2016

Figure 24 below explores the same data by sector of activity. As the figure illustrates, most (re)sale platforms (70%) and sharing/renting accommodation platforms (60%) were established before 2010. In contrast, almost 70% of the platforms for odd jobs were created between 2012 and 2015., While a substantial number of ride hring/sharing platforms were set up in the pre-2010 period (38%), more than half had been created as of 2012. Almost 60% of platforms for renting and sharing of goods were created in 2012 or after.

Figure 24: Timeline of platform creation in Europe (by year and sector)



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

The development of a large number of platforms before 2010, especially in the (re)sale of goods sector, is linked to the development of e-commerce since 2000. Pioneers such as eBay used the same technology for P2P transactions. Network effects, as described by Querbes-Revier (2014)¹⁷⁶ helped to consolidate and expand the peer base over time in the P2P (re)sale of goods sector as in regular e-commerce, as shown by the growth stories of Amazon (Chaffey, 2014¹⁷⁷) or eBay (see Task 4 case study)

Authors such as Forbes (2014) have argued that many P2P sharing or collaborative platforms were created to use resources more efficiently¹⁷⁸, especially after the 2008 financial crisis. A report for the European Commission (2013) found that, as a consequence of the crisis, consumers became more interested in P2P businesses¹⁷⁹. In the EU and Norway this appears to be in particular the case for ride hring/sharing, renting/sharing of goods and odd jobs platforms.

To obtain an indication of the user base of **platforms and their popularity**, data about the number of daily unique website visitors were used. This indicator has certain limitations: only websites can be taken into account, due to difficulties in obtaining user data of mobile apps, and daily visitor statistics could only be collected from third parties.

Where possible, **financial results** were obtained from the Orbis database.

Table 11 displays the daily unique visitors, financial results and number of registered users of 29 large EU P2P platforms. Note, however, that most websites do not indicate the total number of registered users, and some websites do not require logging in for posting or replying to a listing.

The selection of the platforms in Table 11 below was made as follows:

- a) The top 100 platforms in our sample according to daily visitor numbers were selected;
- b) Company information (VAT numbers) was identified for only 66 of them. These were researched in the Orbis database for revenue information and number of subsidiaries.
- c) To maintain higher accuracy, legal entities with over 2 subsidiaries were excluded to focus information presented in this table on the individual platforms, and not on the larger legal entity. For instance, some platforms such as Allegro in Poland and OLX in Romania are owned by larger media groups. Orbis does not disaggregate turnover/profit per operation (platform level in this case), but only reports at group level. Reporting

¹⁷⁶ Querbes-Revier, A. (2014). Banned from the Sharing Economy: An Agent-Based Model of the Peer-to-Peer Distribution of Consumer Goods. Available at: https://www.researchgate.net/publication/269037094_Banned_from_the_Sharing_Economy_An_Agent-based_Model_of_the_Peer-to-Peer_Distribution_of_Consumer_Goods?enrichId=rgreq-204ea2e4395d6636bb22b38c0aac3adb-XXX&enrichSource=Y292ZXJQYWdIOzI2OTAzNzA5NDtBUzoxNjk5OTM1MDUzNTM3MjhAMTQxNzU0MTAxODQxOA%3D%3D&el=1_x_2

¹⁷⁷ Chaffey, D. (2014). Amazon.com case study. Available at: <http://www.smartinsights.com/digital-marketing-strategy/online-business-revenue-models/amazon-case-study/>

¹⁷⁸ Kaufman, M. (2014). Trust Each Other, The Sharing Economy Is Here to Stay. Forbes. Available at: <http://www.forbes.com/sites/michakaufman/2014/05/16/sharingeconomy/#4a4d42d45f27>

¹⁷⁹ European Commission (2013). *The Sharing Economy. Accessibility based business models for peer-to-peer markets*. Business Innovation Observatory. Available at: <http://ec.europa.eu/DocsRoom/documents/13413/attachments/2/translations/en/renditions/native>

turnover/operating profit of the entire group under a single platform would distort results. Data were thus finally available for only 29 platforms, which is not a representative sample.

Table 11: Daily unique visitors, turnover and operating profits of 29 large European P2P platforms¹⁸⁰

Sector	Country of operation	Daily unique visitors	Platform name	Turnover EUR 1,000s 2014	Operating profit EUR 1,000s 2014	Nr of registered users
(Re)sale goods	Sweden	224,599	Tradera	14,108	-3,022	2,500,000
(Re)sale goods	Estonia	6,231	Soov.ee	472	17	108,100
(Re)sale goods	France	1,631,500	Le Bon Coin	134,812	87,232	n.a.
(Re)sale goods	Poland	1,337,000	OLX	2,624	-6,401	14,000,000
(Re)sale goods	Italy	474,000	Subito	19,793	-8,528	n.a.
(Re)sale goods	UK	354,000	GumTree	64,650	27,120	n.a.
(Re)sale goods	Spain	134,035	Trovit	22,730	7,530	n.a.
(Re)sale goods	Estonia	88,500	osta-ee postimees	1,850	-24	n.a.
(Re)sale goods	Italy	67,850	Bakeca.it	4,458	79	n.a.
(Re)sale goods	Germany	52,468	Rebuy.de	57,960	-2,803	3,500,000
(Re)sale goods	France	42,500	Vestiaire Collective	12,367	-7,666	1,500,000
(Re)sale goods	Slovenia	41,000	Bolha.com	1,374	-169	n.a.
(Re)sale goods	Lithuania	39,788	Skelbiu.lt	5,397	3,096	n.a.
(Re)sale goods	Bulgaria	37,740	Mobile.bg	2,148	359	n.a.
(Re)sale goods	Portugal	29,197	CustoJusto	562	-818	n.a.
(Re)sale goods	Italy	24,841	SecondaMano	156	17	n.a.
(Re)sale goods	Czech Republic	21,178	Annonce.Cz	1,999	-401	n.a.
(Re)sale goods	Norway	16,095	Netthandelen	40,988	1,400	n.a.
(Re)sale goods	Romania	14,279	ClubAfaceri.ro	170	18	n.a.
(Re)sale goods	Estonia	14,175	OkiDoki.ee	215	22	300,000
(Re)sale goods	Norway	10,795	QXL.no	795	82	1,200,000
(Re)sale goods	Poland	9,008	Swistak.pl	4,287	380	80,000
(Re)sale goods	Hungary	8,636	Jofogas.hu	637	-9,661	n.a.
(Re)sale goods	Belgium	7,589	KoopjesKrant.be	214	200	n.a.
(Re)sale goods	Slovakia	5,655	Mojasvadba	1,498	152	n.a.

¹⁸⁰ The table excludes the P2P platforms developed as case studies in Task 4.

Sector	Country of operation	Daily unique visitors	Platform name	Turnover EUR 1,000s 2014	Operating profit EUR 1,000s 2014	Nr of registered users
Odd jobs	Sweden	173,500	Blocket	91,025	47,092	n.a.
Sharing/Renting Accommodation	Spain	17,623	Niumba.com	2,578	6,014	700,000
Sharing/Renting Accommodation	Spain	11,623	Rentalia.com	2,222	970	53,400
Sharing/Renting Accommodation	Czech Republic	1,477	Bezrealitky.cz	516	158	n.a.

Source: Orbis database, HypeStat.com

The data in Table 12 indicate that (re)sale of goods platforms are among the most popular and most profitable P2P platforms in the EU. The data also suggest that popularity is not directly correlated to turnover or operating profit. The results indicate that other factors, such as business strategies and business models, including monetisation model (see sub-section 4.3) or service offering (see sub-section 4.2) might play a more important role in determining financial results.

To summarise, most P2P platforms in this study's sample (48%) were established before 2010, except for the odds jobs, ride hiring and sharing and renting/sharing goods platforms which were created mostly as of 2012.

Based on the limited number of platforms for which data about profitability were available, it appears that there is no straight relationship between turnover, profit and platform popularity. Thus, other factors, such as business strategies and business models are more likely to explain financial outcomes.

4.3 Peer participation

This sub-section further builds the review of platform popularity by examining differences between sectors of activity. The results provide context to the economic estimation in sub-section 5.4 by indicating where most of the estimated peer expenditure and peer revenues occur, and who spends/earns on P2P platforms.

To address the aspect of peer participation on platforms, this sub-section uses the number of daily unique visitors for each P2P market, as well as publicly-available figures on the number of registered peers and listings. In addition, this sub-section computes the basic indicators needed for the estimation of EU-level peer revenues and peer expenditure in sub-section 5.4.

4.3.1 Peer usage of online platforms

This sub-section describes the methodology applied in this Task to compute the supporting figures for the formula indicated in sub-section 5.1. More specifically, the following formula parameters are used:

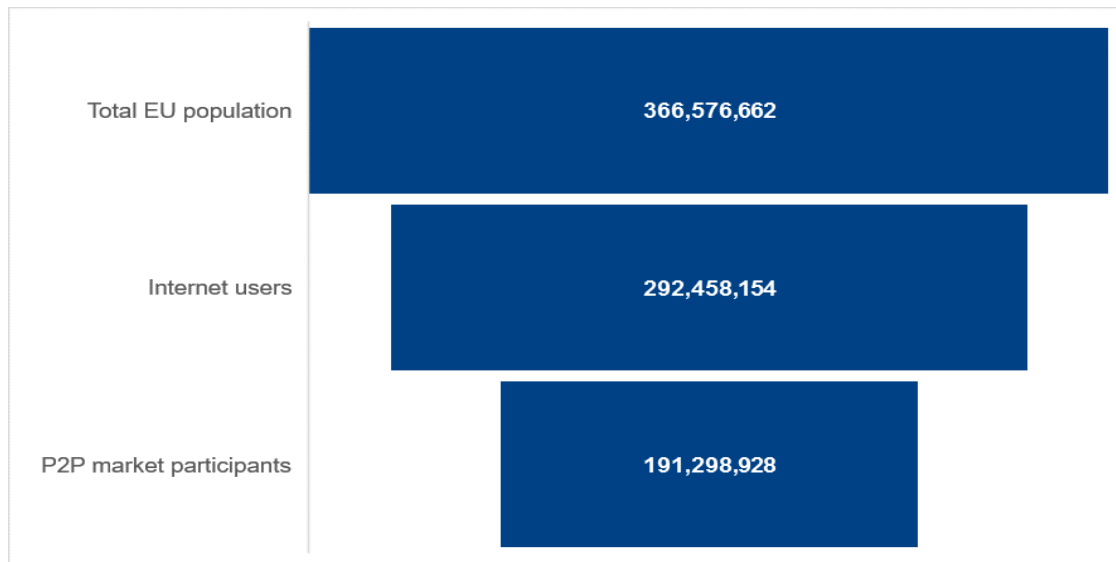
- $MS(Int_{users})$ = the total number of internet users in the EU, based on the EUROSTAT data taken from the European Commission’s (2015) Digital Single Market report;
- $Tot(P2P_{users})$ = 65.41% of total active respondents engaged in P2P transactions, based on the 10 MS in which the survey ran.
- $SEC(P2P_{consumers})$ = the percentage of peer consumers in each sector under study, out of the total number of active users of P2P platforms ($Tot(P2P_{users})$).

The number of internet users in the EU ($MS(Int_{users})$) is retrieved from the European Commission’s (2015) Digital Single Market report, which in turn relies on EUROSTAT. According to the European Commission (2015), at EU-level 79.8% of all EU citizens aged 16-74 have used the internet in the past year. In the economic estimation, therefore, the total number of internet users in the EU is 79.% of 366,576,662 people, meaning 292,458,154 people.

The percentage of active respondents engaged in P2P transactions ($Tot(P2P_{users})$) is retrieved from the Task 2 survey, where 9,547 respondents out of 14,597 in 10 MS confirmed their active (i.e. monetary) involvement as provider or consumer on an online platform within the past 12 months.

Based on $MS(Int_{users})$ and $Tot(P2P_{users})$, it is possible to extrapolate, at EU-level, the results obtained in the Task 2 survey carried out in 10 MS. The extrapolation is subject to the methodological limitations indicated in sub-section 5.1. Figure 25 illustrates the process through which this study computes a figure of 191.3 million active P2P market participants.

Figure 25: Number of active P2P market participants in the total population (aged 16-74), EU-28 extrapolated from EU-10



Source: VVA analysis based on European Commission (2015). Digital Single Market Report (Provision of two online consumer surveys as support and evidence base to a Commission study: Identifying the main cross-border obstacles to the Digital Single Market and where they matter most).

Finally, this report relies on input from the Task 2 survey to estimate the percentage of peer consumers and peer providers, in each sector under study, that are actively involved in P2P transactions (i.e. $SEC(P2P_{consumers})$ and $SEC(P2P_{providers})$, both derived out of $Tot(P2P_{users})$). In doing so, this report uses sector-specific percentages of activity for both peer providers and peer consumers within each of the five sectors, as given by the Task 2 survey. A respondent is considered an active peer consumer if they report to have spent more than EUR 0 on a platform belonging to any of the five sectors in this study. A similar approach is taken for peer providers. The percentages of active peer consumers and peer providers are reported below:

Figure 26: Percentage of peer providers and peer consumers that engage in monetary P2P transactions (i.e. active), per sector

Sector	Active peer consumers (% of total active respondents)	Active peer providers (% of total active respondents)
(Re)sale goods	62.14%	56.41%
Sharing/renting goods	4.41%	4.29%
Sharing/renting accommodation	8.23%	5.39%
Sharing/hiring rides	9.28%	8.31%
Odd jobs	3.84%	3.47%

Source: Task 2 survey; Base: all active respondents (N=9,548)

The variables derived in this sub-section are used in sub-section 5.4 to estimate the total amount of peer expenditure and peer revenue from P2P transactions at EU-level.

4.3.2 Daily unique visitors

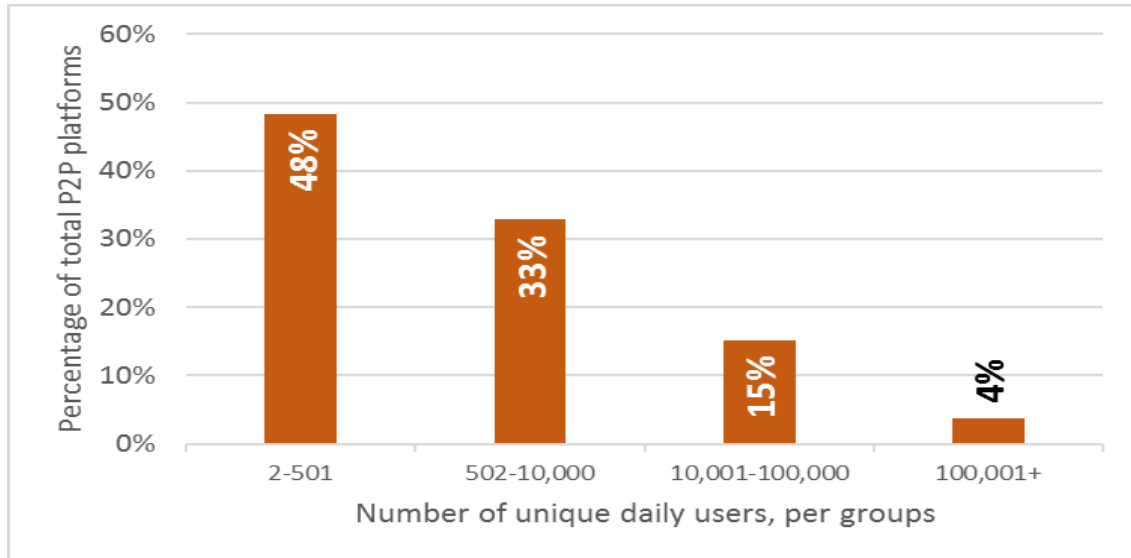
Of the 485 P2P platforms identified in Task 1, website traffic information (in daily and monthly unique peer visits) was available for 457. According to these statistics, presented in Figure 27 below, 48% of platform websites have a small daily visitor base (2-501 daily unique visitors), 33% a medium-sized base (502-10,000 daily unique visitors), 15% a large (10,001-100,000 daily unique visitors) and 4% a very large visitor base of more than 100,000 daily unique visitors.

It should be noted that a web visitor is not necessarily the same as a registered peer on the platform, and data about use of platforms through mobile app are not available and could not be taken into account. Unique viewers represent unique IP (internet protocol) addresses that have visited a certain website per day. These are associated to individual computers. All data were derived from the website www.hypestat.com.

These findings do not mean that the majority of P2P transactions take place on small platforms, but rather that the landscape of P2P platforms in the EU and Norway consists mostly of small and medium-sized platforms. This result is broadly

in line with data about overall size of companies in the EU, as SMEs account for 99% of all businesses in the EU¹⁸¹.

Figure 27: Daily unique visitors in all five P2P markets

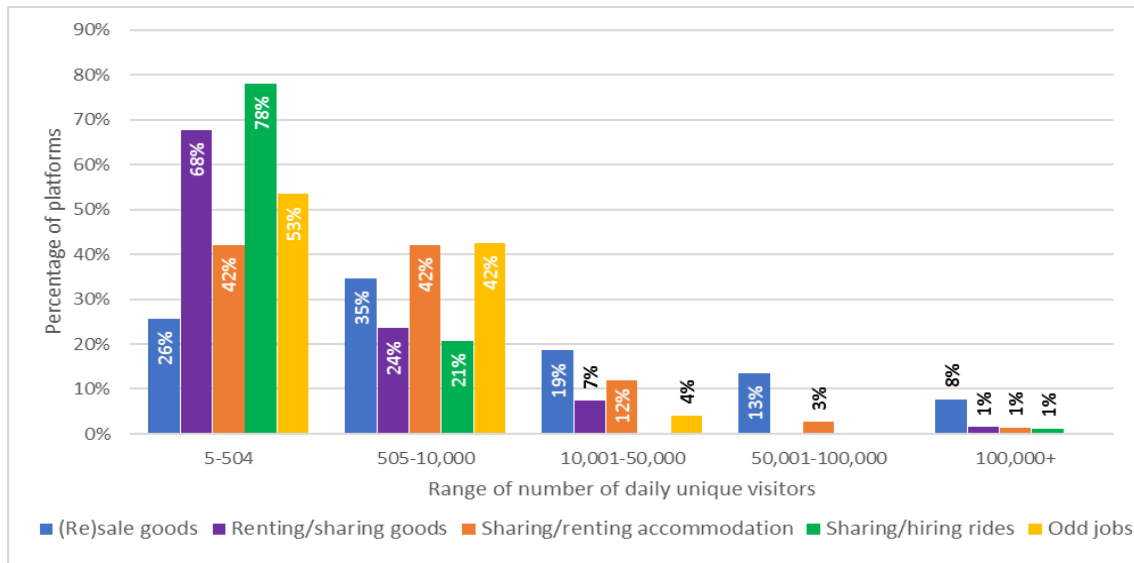


Source: VVA analysis based on data collected from the websites of 457 sharing platforms from March to December 2016. Within the sample of 485 platforms, HypeStat.com does not report data on 28 platforms.

The same distribution is broadly found in all five P2P markets evaluated in this study, as shown in Figure 28 below. Small platforms represent the vast majority in the renting/sharing goods (68% of platforms) and sharing/hiring rides (78%) markets. Slightly over half of odd jobs platforms (53%) are have a visitor base of less than around 500 peers, as do 42% of sharing/renting accommodation platforms. In two markets, (re)sale goods and sharing/renting accommodation, medium-sized, large or very large platforms are more prevalent.

¹⁸¹ European Commission (2016). What is an SME?. Available at: http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en

Figure 28: Daily unique visitors, per P2P market



Source: VVA analysis based on data collected from the websites of 457 sharing platforms from March to December 2016. Within the sample of 485 platforms, HypeStat.com does not report data on 28 platforms.

As seen in Figure 28 above, only a small percentage of platforms, overwhelmingly from the (re)sale goods market, have over 100,000 daily unique visitors on their websites. Overall, the (re)sale goods market account for most medium, large and very large P2P platforms in the sample.

Available data do not allow to determine the country of origin of the daily unique visitors. It is therefore not possible to test the hypothesis that peers in neighbouring countries with a similar language or sufficient language skills use platforms in other, bigger countries (e.g. Luxembourgish users, fluent in French, might use the French LeBonCoin).

However, Table 12 provides an indication of the countries of operation of the P2P platforms in the sample that have **over 100,000 daily unique visitors**, based on data from HypeStat.com. HypeStat records visits from all over the world, not only from the platforms' country of establishment, and relies on internet protocol (IP) numbers to identify unique visitors.

Since data collection focused on autochthonous platforms (i.e. platforms created locally) in each country, the data of visitors to platforms that operate in more than one country are reported together and listed under the Member State where the platform was founded, also to avoid duplications in the dataset. For completeness, information on daily unique visitors was gathered provided for international versions of four platforms: eBay.com, AirBnB.com, BlaBlaCar.com and Uber.com. National language versions of these platforms are included in the table if they feature more than 100,000 daily visitors.

Table 12: Selected platforms with over 100,000 daily visitors

Sector	Country of operation/international website	Platform name	Daily unique visitors
(Re)sale goods	International website	Ebay.com ¹⁸²	9,505,000
	DE	Ebay.de	2,610,500
	UK	Ebay.co.uk	2,366,500
	FR	le bon coin	1,631,500
	PL	OLX	1,337,000
	IT	Ebay.it	753,500
	PL	Oferia	718,000
	IT	subito	622,709
	FR	Ebay.fr	492,500
	UK	PreLoved	371,000
	ES	Ebay.es	369,500
	NL	Speurders	322,500
	NO	NettHandelen	280,500
	RO	OLX	231,500
	SE	Tradera	224,599
	IE	Ebay.ie	143,000
	HR	Njuskalo	107,000
IT	kijiji	106,373	
SE	FyndtOrget	100,793	
Sharing/hiring rides	International website	Uber.com ¹⁸³	519,500
	PL	Trovit Platform	134,035
Sharing/renting accommodation	International website	AirBnB.com ¹⁸⁴	761,500
	DE	de.airbnb.com	406,621
Sharing/renting goods	SE	Blocket	173,500

Source: HypeStat.com

The most popular platforms are generally based in larger countries, where the larger population creates a larger market for P2P transactions. For example, the Polish and Romanian language versions of OLX are among the largest P2P platforms.

As shown in Table 12 above, there is a large degree of variation among the number of daily unique visitors, even in the case of very large platforms. The international, German and UK sites of eBay, the French Le Bon Coin and the Polish OLX all attract

¹⁸² National versions checked: AT, BE, FR, DE, IE, IT, NL, PL, ES, SK, UK.

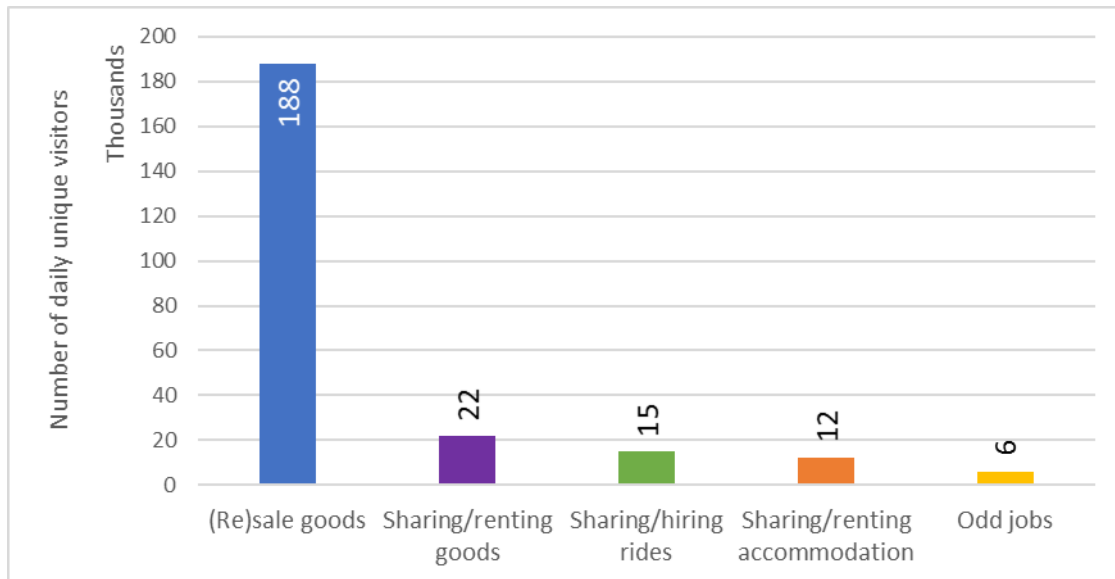
¹⁸³ Uber has only one website translated in different languages. The number of daily unique visitors could not be disaggregated by Member State, and it thus reflects the daily visitors from all over the world which access the website.

¹⁸⁴ Although it appears that Airbnb platform is hosted by different websites with different domain names for each country it operates in, the reported number of daily unique visitors is the same for the Danish, Spanish, Greek, Italian, Hungarian, Dutch, Norwegian, Polish, Portuguese, Finnish, and Swedish versions of the website (i.e. 761,500). This may indicate that there is in fact one version of Airbnb translated in different languages, but different than AirBnb.com

more than a million daily unique visitors. The international sites of Airbnb and Uber, and the German language version of Airbnb stand out as the most visited websites amongst the collaborative platforms.

The pattern is similar within each of the five P2P markets, as already shown in Figure 28. To better illustrate intra-market differences in platform popularity, Figure 29 below displays the standard deviation in daily unique visitors for each P2P market.

Figure 29: Standard deviation¹⁸⁵ in daily unique visitors for each P2P market



Source: VVA analysis based on data collected from the websites of 485 sharing platforms from March to December 2016

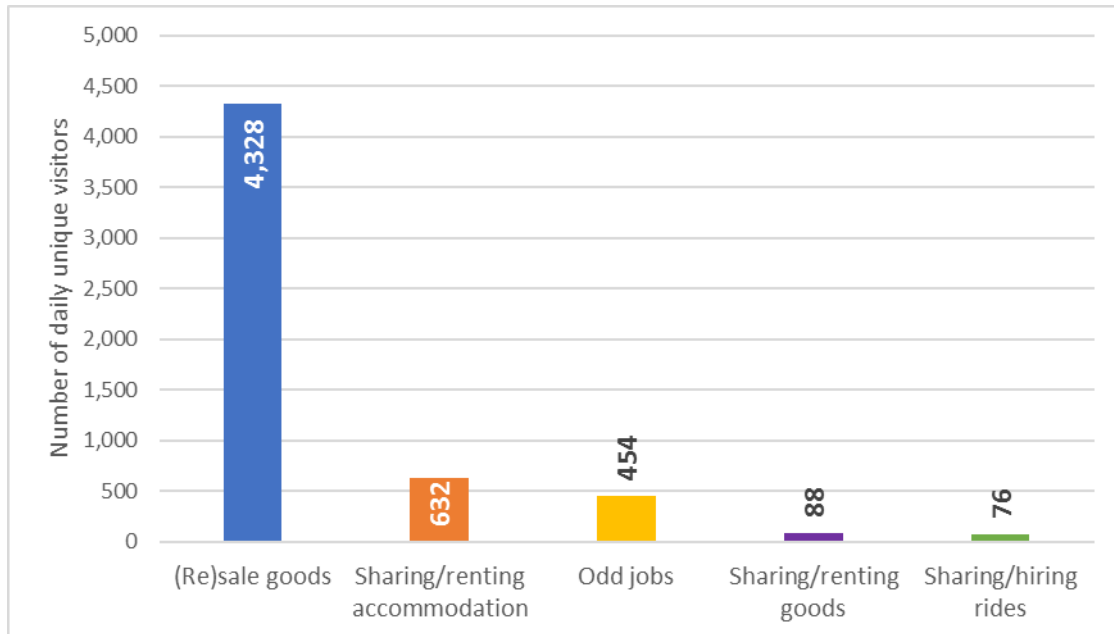
The largest variation in platform popularity occurs in the **(re)sale goods** market, indicating that there are a few very popular platforms and a large number of very small ones. The remaining four P2P markets (so-called “collaborative economy platforms”) have little variation, in comparison. The P2P market with the highest degree of homogeneity in platform popularity is the odd jobs market, with a variation half that of the sharing/renting accommodation market.

It should be noted that visitor statistics are likely to be not representative for markets where a large percentage of platforms offer mobile apps (see sub-section 4.2.5). This mainly concerns the sharing/hiring rides (42% of platforms in the market operate via mobile app), the (re)sale goods market (40% of platforms in the market operate via mobile app), or large platforms in the sharing/renting accommodation market that use both a website and app, such as AirBnB.

¹⁸⁵ Standard deviation measures the variation in a dataset. The larger it is, the more diverse the values are among each other. In this sample, eBay, Uber and AirBnB were excluded, given that they are much more popular than other platforms, and their inclusion would provide less meaningful results.

Taking into account the large degree of variation between platform popularity within each P2P market, Figure 30 below displays the median number of daily unique visitors per platform in each P2P market. The median was chosen over the mean because it is a more representative figure in samples with large of variations in data points.

Figure 30: Median number of daily unique visitors per P2P market



Source: VVA analysis based on data collected from the websites of 457 sharing platforms from March to December 2016. Within the sample of 485 platforms, HypeStat.com does not report data on 28.

Figure 30 confirms the finding that (re)sale goods platforms are the most popular in the sample. Sharing/renting accommodation platforms have a median of 632 daily visitors, followed closely by odd jobs platforms. Sharing/renting goods and sharing/hiring rides platforms are the least popular in the sample, but this may be due to the large number of such platforms that operate primarily via apps.

To summarise, this sub-section finds a large variation in the visitor/user numbers of P2P platforms, both across the five P2P markets studied, as well as within each market. The largest variation, by far, occurs among (re)sale goods platforms, and the least variation is seen in the odd jobs market. The (re)sale goods market is the only market in this study where small platforms (i.e. platforms receiving between 5 and 504 daily unique visitors) are not the largest group. In contrast, the sharing/hiring rides and sharing/renting goods sectors consist overwhelmingly of such small platforms. Sharing accommodation platforms are comparable to odd jobs platforms in terms of popularity.

4.3.3 Registered peers and number of listings

To illustrate differences between countries, this study uses publicly-available data on the number of peer consumers, peer providers and listings for each of the 485

platforms. The research to gather these data encountered several challenges such as:

- It is not possible, in many cases, to distinguish between peer consumers and peer providers. Many platforms use one account for both consumer and provider activity. As such, reported numbers of peers users account for both types of peers.
- Even though peers are registered, it is likely that a large percentage of them are not active. The Peerby case study in Task 4, for instance, finds that 50% of Peerby Go users are not active at all.
- The data is based on self-reported figures by platforms, and have not been cross-checked with other sources.
- Registered users on platforms operating in more than one country are counted in the Member State where the platform was founded. This was done to avoid duplications in data collection, and also because very often, platforms do not disaggregate their user base per Member State.
- For four main international platforms (eBay.com, AirBnB.com, BlaBlaCar.com and Uber.com) the registered users of the international versions were included. National versions of these platforms do not systematically provide data on the registered number of users and listings. Therefore a comprehensive overview of national data for these four platforms was not possible.
- The number of peers and listings is changing constantly. The figures obtained here are as of August 30, 2016, and they are very likely to change significantly over time.

Considering the above-mentioned limitations, Table 13 reports on the number of registered peer consumers, peer providers and the number of listings on each platform with more than 100,000 registered users.

Table 13: P2P platforms with over 100,000 peers

Sector	Country of operation/international website	Name	Number of registered peers	Number of listings
(Re)sale goods	International	eBay	190,000,000 ¹⁸⁶	1 billion
Sharing/ renting accommodation	International	AirBnB	100,640,000 ¹⁹⁰	3,000,000
Sharing/hiring rides	International	BlaBlaCar	20,000,000 ¹⁹⁰	<i>Not available</i>
Sharing/hiring rides	International	Uber	40,050,000 ¹⁹⁰	<i>Not available</i>
(Re)sale goods	AT	Gebraucht Wagen	1,000,000	90,000
(Re)sale goods	BG	Prodavalnik	925,518	<i>Not available</i>
(Re)sale goods	BG	Olx	766,532	1,384,988
(Re)sale goods	DE	Kleider Kreisel	12,000,000	22,300,000

¹⁸⁶ The number of registered peers is reported at international level (i.e. all users in the world, including non-EU countries, registered on the platform).

Exploratory study of consumer issues in online peer-to-peer platform markets –
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Sector	Country of operation/international website	Name	Number of registered peers	Number of listings
(Re)sale goods	DE	Zweite Hand	10,000,000	1,000,000
(Re)sale goods	DE	Rebuy	3,500,000	<i>Not available</i>
(Re)sale goods	DK	trendsales	915,000	<i>Not available</i>
(Re)sale goods	EE	Okidoki	300,000	<i>Not available</i>
(Re)sale goods	ES	Loquo	49,000,000	<i>Not available</i>
(Re)sale goods	ES	Vibbo	40,000,000	2,500,000
(Re)sale goods	ES	Mil anuncios	20,000,000	5,000,000
(Re)sale goods	ES	Wallapop	13,000,000	80,000,000
(Re)sale goods	FR	vestiairecollective	1,500,000	<i>Not available</i>
(Re)sale goods	FR	larmoiredespetits	1,000,000	<i>Not available</i>
(Re)sale goods	HU	StartaPro	250,000	<i>Not available</i>
(Re)sale goods	NL	SnappCar	8,810,416	110,416
(Re)sale goods	NL	Speurders	7,600,000	300,000
(Re)sale goods	NL	Spullen Delen	2,000,000	<i>Not available</i>
(Re)sale goods	NL	Ruilen	1,167,170	1,254,105
(Re)sale goods	NO	Qxl	1,200,000	<i>Not available</i>
(Re)sale goods	NO	Rubrikk	1,200,000	<i>Not available</i>
(Re)sale goods	PL	Olx	14,000,000	45,009,108
(Re)sale goods	RO	Publi24	142,000	3,000,000
(Re)sale goods	SI	Mascus	232,856	189,257
(Re)sale goods	SI	NajdiPrevoz.si	122,888	273,851
(Re)sale goods	UK	OpenPlay	11,000,000	22,300,000
(Re)sale goods	UK	SpareRoom	6,000,0000	650,000
Odd jobs	ES	Top ayuda	200,000	<i>Not available</i>
Odd jobs	FR	kang	250,000	<i>Not available</i>
Odd jobs	FR	worldcraze	200,000	<i>Not available</i>
Odd jobs	FR	allovisin	150,000	<i>Not available</i>
Odd jobs	PL	Vacando	400,000	<i>Not available</i>
Odd jobs	UK	Trusted House Sitters	4,000,000	30,000
Odd jobs	UK	ShiPLY	220,000	<i>Not available</i>
Sharing/ renting accommodation	AT	EasyWG	5,000,000	20,000
Sharing/ renting accommodation	AT	ImmoSuchMaschine	400,000	<i>Not available</i>
Sharing/ renting accommodation	BE	Recherche Colocation	597,873	<i>Not available</i>
Sharing/ renting accommodation	DE	Gloveler	2,040,000	40,000
Sharing/ renting accommodation	DE	Wimdu	400,000	300,000

Sector	Country of operation/international website	Name	Number of registered peers	Number of listings
Sharing/renting accommodation	ES	Idealista	6,000,000	1,357,245
Sharing/renting accommodation	ES	Niumba	700,000	100,000
Sharing/hiring rides	BE	Carpool	135,198	<i>Not available</i>
Sharing/hiring rides	DE	Flinc	250,000	<i>Not available</i>
Sharing/hiring rides	DK	gomore	417,296	<i>Not available</i>
Sharing/hiring rides	ES	Amovens	400,000	<i>Not available</i>
Sharing/hiring rides	UK	Under the Doormat	251,800	<i>Not available</i>
Sharing/renting goods	CZ	Expats.Cz	2,100,000	2,100,000
Sharing/renting goods	IT	fubles	533,322	<i>Not available</i>
Sharing/renting goods	PL	Wymianki	1,000,000	782,721

Source: Platform websites

As shown in Table 13, there is a large degree of variation among the number of registered peers and listings. As for the number of daily unique visitors, the re(sale) sector accounts for the largest number of registered peers and listings. The four large international platforms have a much larger number of registered peers and listings than any national site.

4.3.4 Peer expenditure and revenue distribution

The Task 2 survey results regarding **expenditure and revenue** indicate (Table 14) that **a major part of expenditure (50 to 60%) and revenue (50 to 70%) is driven by a small share of very active peer consumers and peer providers**. The average value is skewed upward by a small percentage of individuals who are outliers compared to the overall distribution of peer consumers or peer providers.

Table 14: Percentage of total expenditure and revenues by the top 10% of peer consumers and peer providers, per sector, in the 10 MS under study¹⁸⁷

Sector	Share of expenditure by top 10% of peer consumers	Share of revenue by the top 10% of peer providers
(Re)sale goods	55%	69%
Renting/sharing goods	51%	57%
Sharing/hiring rides	57%	61%
Sharing/renting accommodation	51%	54%
Odd jobs	58%	61%

Source: VVA analysis of Task 2 survey data

¹⁸⁷ The figures were computed by only considering consumers that spend more than EUR 0 in their sectors of activity.

Such skewed levels of peer expenditure and revenues are not uncommon in P2P platform markets. The phenomenon was reported for peer revenues in the ING (2015) survey, which found an 8.3-fold difference between the mean (EUR 2,500) and median (EUR 300) peer revenue. Though the study is based on a different definition of the relevant market (sharing of assets that otherwise would sit idle), ING found that as much as 80% of revenue ends up in the hands of 10% of peer providers¹⁸⁸. In the present sample, by focusing on the same sectors (thus removing (re)sale goods and odd jobs) and only considering the providers that declared at least some earnings, the top 10% of peer providers earn 56% of all revenues in Box 4.

Based on median expenditure¹⁸⁹ reported by survey respondents, the total expenditure by peer consumers in the EU P2P economy in the five sectors examined is estimated at EUR 27.9 billion. The figure is computed by multiplying the median expenditure for each sector with the estimated total number of peer consumers in each sector (see sub-section 5.1), and then summing up the five sectors.

The total peer expenditure is broken down by Member State and Figure 32 visualises the estimates of peer consumer expenditure in each EU MS.¹⁹⁰

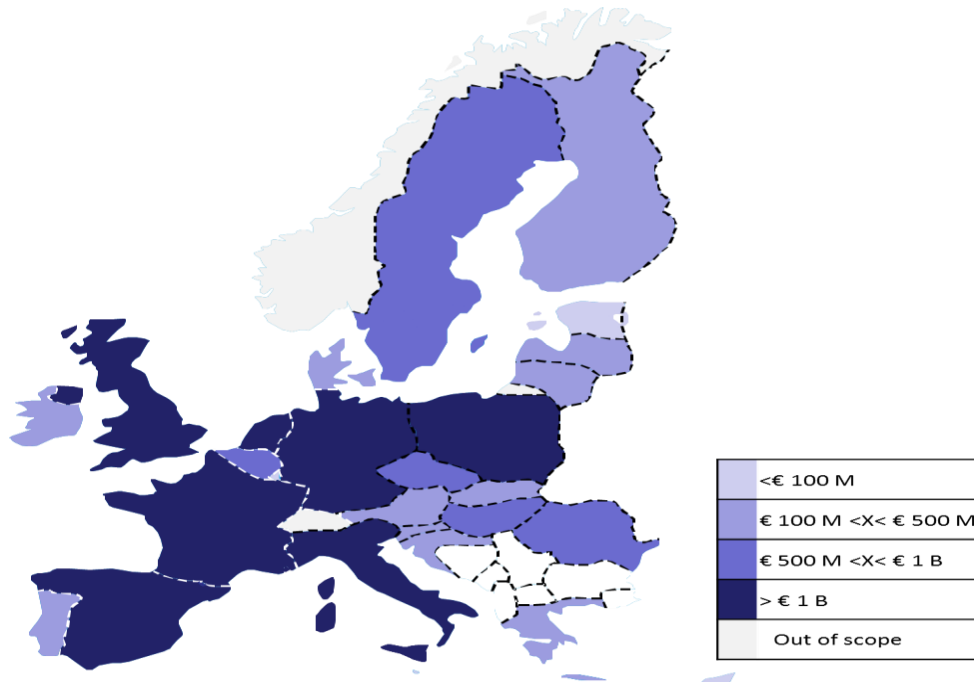
The calculation method adopted for total peer expenditure assumes that the main variable across MS is their active internet population, while the percentage of peer consumers involved in P2P transactions in each of the five sectors is assumed to be overall similar in all MS and equal to the average derived from the survey responses received in the 10 MS under study.

¹⁸⁸ ING International Survey (2015), WHAT'S MINE IS YOURS – FOR A PRICE. RAPID GROWTH TIPPED FOR THE SHARING ECONOMY.

¹⁸⁹ If we had considered mean expenditure, total expenditure by peer consumers in the EU P2P markets is estimated at EUR 71.67 Billion.

¹⁹⁰ The overall figures for total spending by peers across all P2P sectors were aggregated and produced an EU-level figure of EUR 27.9 billion. To map this figure, this study multiplied the median user expenditure with the percentage of sharing economy users at EU level times the internet population of each Member State. Therefore, the proportions assigned to each Member State are solely based on their number of internet users, and not on the actual spending/earning patterns recorded through the study's survey.

Figure 31: Total estimated yearly spending by peer consumers on P2P platforms, by EU Member State.



Source: VVA analysis based on Task 2 survey data

Country-specific estimated annual peer consumer expenditure is reported in Table 15. The differences between countries reflect the Member States population size and the incidence rate of internet use in each country. According to the estimation model, in larger MS the total value of peer consumer spending is higher than in less populous countries. However, in the Netherlands, where 94 % of the population uses the internet peer consumer expenditure is higher than in more populous countries like Romania, where only 59% of the population uses the internet, which limits the potential P2P platform user base.

Table 15 : Total estimated peer consumer annual spending in EU28 MS, based on estimations from Task 2 survey responses

Country	TOTAL
	Total yearly spending (EUR million)
EU28	27,905
Austria	497
Belgium	651
Bulgaria	310
Cyprus	43
Czech Republic	614
Germany	4,993
Denmark	372

Country	TOTAL
	Total yearly spending (EUR million)
Estonia	78
Greece	482
Spain	2,504
Finland	347
France	3,688
Croatia	207
Hungary	547
Ireland	247
Italy	2,691
Lithuania	149
Luxembourg	36
Latvia	109
Malta	23
Netherlands	1,089
Poland	1,887
Portugal	482
Romania	819
Sweden	613
Slovenia	108
Slovakia	326
UK	3,996

Source: VVA analysis of Task 2 survey data

At sector level, it can be estimated, using the same model, that **the (re)sale of goods sector accounts for an estimated EUR 17.8bn in peer consumer spending per year** (see Figure 32). It is estimated that peers spend 2.7 times more in P2P transactions in the (re)sale sector compared to the second-largest sector, the sharing/renting accommodation with 6.6 billion EUR annual expenditure. In turn, expenditure in the sharing/renting accommodation is more than five times higher than that in the sharing/renting goods, odd jobs sector and ride sharing/hiring sectors, where expenditure is estimated to reach between 1 and 1.3 billion EUR. Peers spend the least in the sharing/hiring rides sector, which is 17.8 times smaller than the (re)sale goods sector¹⁹¹.

¹⁹¹ Due to the low sample size considered in this study's survey only across 10 Member States, it was not possible to disaggregate expenditure per sector in each MS. Such a disaggregation would need to be solely based, as Figure 7 is, on the different internet population in each MS, while keeping everything else equal across MS.

Figure 32: Total estimated annual peer consumer spending in P2P online markets, per sector, EU-28



Source: VVA analysis of Task 2 survey data, EC (2015). Provision of two online consumer surveys as support and evidence base to a Commission study: Identifying the main cross-border obstacles to the Digital Single Market and where they matter most.

Considering only the sectors that are included in the European Commission’s (2016)¹⁹² definition of “collaborative economy” by excluding the (re)sale sector, the accommodation sector is clearly the largest collaborative sector in terms of expenditure and ride hiring and sharing the smallest (Figure 33).

Figure 33: Total estimated annual peer consumer spending in P2P markets, per sector (without (Re)sale of goods), EU-28



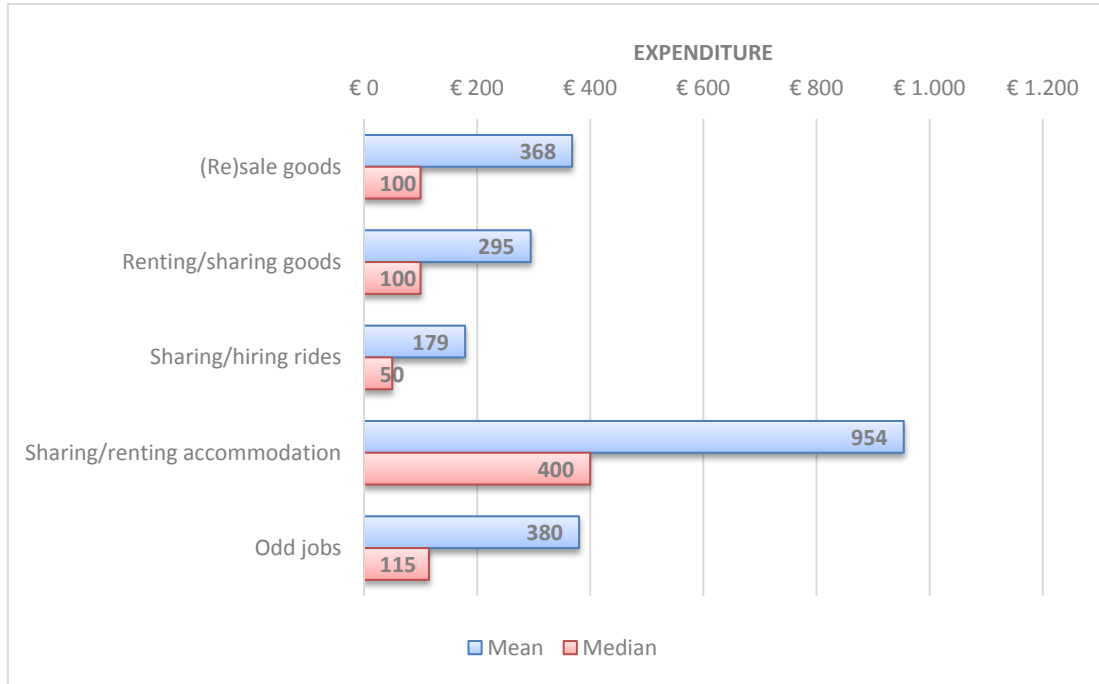
Source: VVA analysis of Task 2 survey data, EC (2015). Provision of two online consumer surveys as support and evidence base to a Commission study: Identifying the main cross-border obstacles to the Digital Single Market and where they matter most.

4.3.5 Peer provider revenue

¹⁹² European Commission (2016). COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS: A European agenda for the collaborative economy. COM (2016) 356 Final.

Figure 34 shows the mean and median values of peer provider revenue in each of the five markets under study. The figure shows a large spread between mean and median values. The the mean is 3.68 times the median in the (re) sale of goods sector , and 2.38 times the median in the sharing/renting accommodation sector.

Figure 34: Mean and median annual P2P provider revenue, per sector, EUR



Source: VVA analysis of Task 2 survey data

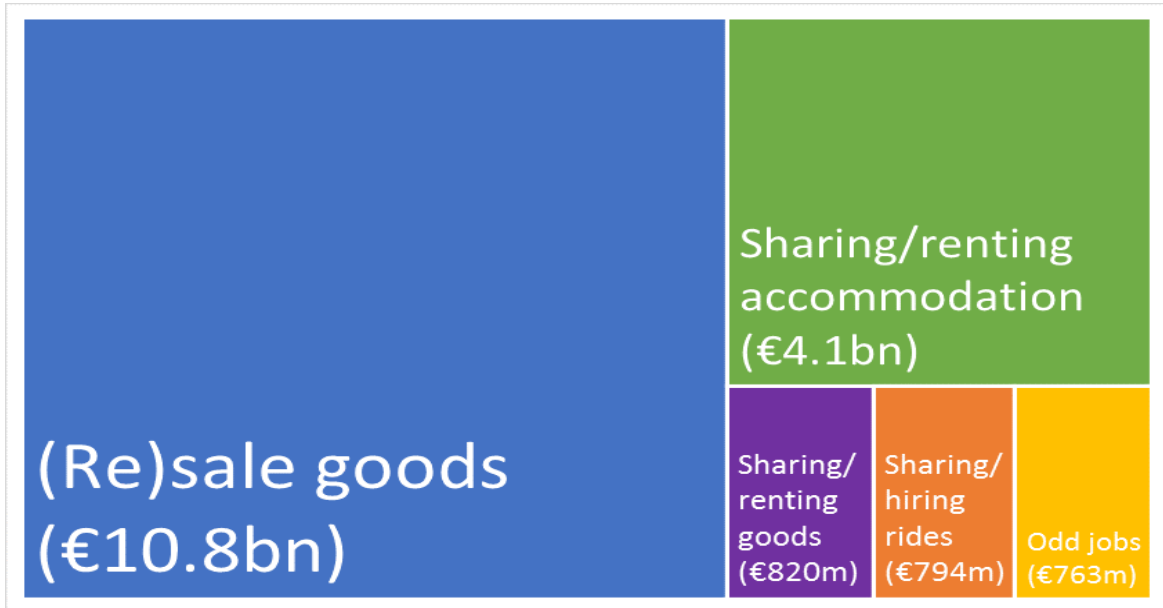
The results based on median values in Figure 35 on peer provider revenues are consistent with those in Figure 31 on peer consumer expenditure: the sharing/renting accommodation is the sector where peers spend and earn the most through P2P transactions, followed by the odd jobs sector. As for peer consumer expenditure, the median value for sharing/hiring rides is the lowest among the five sectors.

The median revenues values presented above can be extrapolated to the EU-level to compute an estimate of total peer provider revenues in the five P2P markets under study. The extrapolation has the potential to diminish the accuracy of the EU-level estimate, given the methodological limitations described in Box 4.

Based on median revenues¹⁹³, total revenues by peer providers in the EU P2P economy in the five sectors examined is estimated at EUR 17.29 billion. The figure is computed by multiplying the median revenues for each sector with the total number of estimated peer providers in each sector, and then summing up the five sectors. The results, disaggregated by economic sector, are illustrated in Figure 35 below.

¹⁹³ If we would have considered the average revenue, the total revenues by peer consumers in the EU sharing economy is estimated at EUR 56.04 Billion.

Figure 35: Total estimated annual peer provider revenue in the P2P online markets, per sector, EU-28



Source: VVA analysis of Task 2 survey data, EC (2015). Provision of two online consumer surveys as support and evidence base to a Commission study: Identifying the main cross-border obstacles to the Digital Single Market and where they matter most.

The distribution of peer provider revenue between sectors in Figure 34 is similar as for peer consumer expenditure illustrated in Figure 32. The proportions, however, are not the same. The (re)sale of goods sector, by far the largest sector for P2P revenues, is estimated at EUR 10.8 billion to be 2.63 times the size of the sharing/renting accommodation sector, the second-largest generating an estimated EUR 4.1 billion in peer revenue. The other three sectors are similar in terms of peer provider revenues, at around EUR 800 million each.

Figure 36 shows the same revenue data for the sectors defined by the European Commission as part of the collaborative economy, without the (re)sale of goods sector.

Figure 36: Total estimated annual peer provider revenue in P2P markets, per sector (without (Re)sale of goods), EU-28



Source: VVA analysis of Task 2 survey data, EC (2015). Provision of two online consumer surveys as

support and evidence base to a Commission study: Identifying the main cross-border obstacles to the Digital Single Market and where they matter most

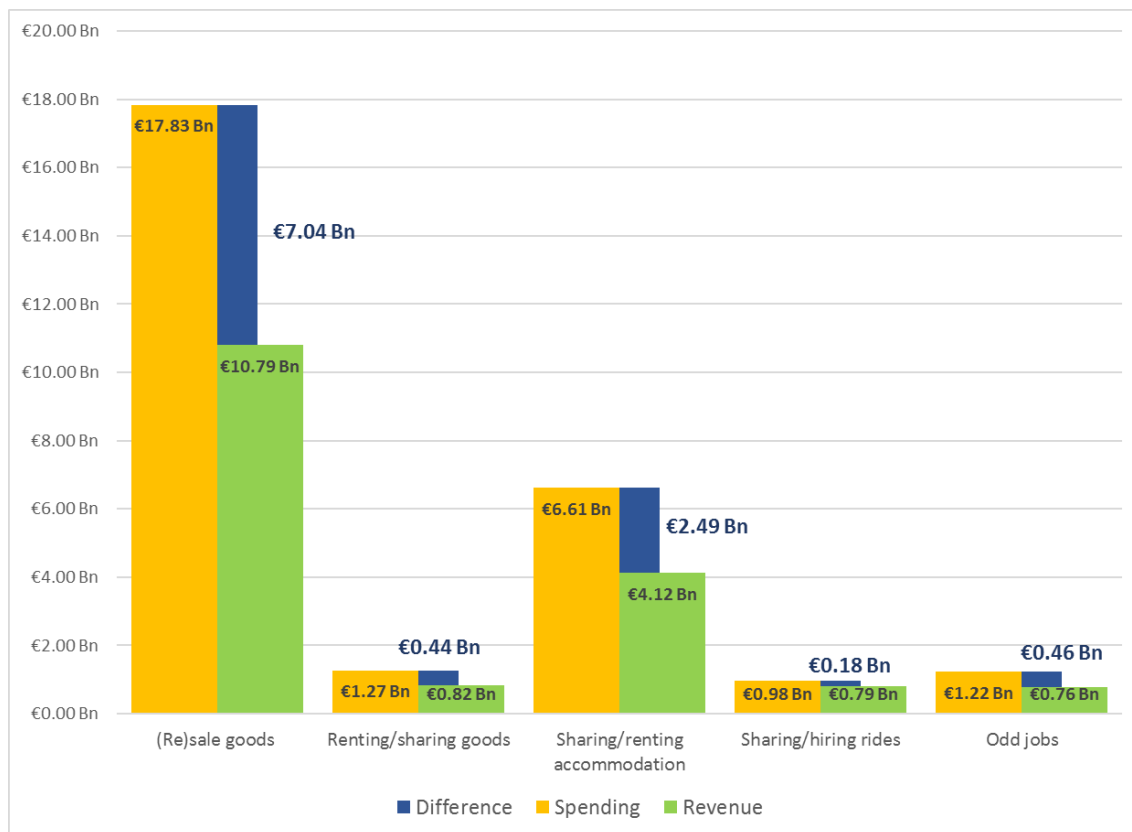
4.3.6 Estimate of the revenue of platforms and other non-peer revenue

Based on the two estimates above for peer expenditure and peer revenues, **the difference between P2P spending and P2P earning is EUR 10.61 billion per year¹⁹⁴**. As illustrated in Figure 37, this difference would mean that, on average, about 61 cents of every euro spent by peer consumers on resale platforms reaches peer providers, and between 61 and 65 cents for odd jobs, accommodation sharing/rental and renting/sharing of goods. On the contrary in the sharing/hiring rides sector 81 cents of every EUR spent reaches the provider¹⁹⁵.

Figure 37: Comparison between revenues and expenditure (EUR Bn)

¹⁹⁴ This estimate is based on the total revenues/expenditure of peers in each economic sector. The average and median values refer to total revenues/expenditures per sector, and do not account for the average/median values per platform used. In addition, the model only considers peers that were involved in monetary transactions on P2P platforms in the previous 12 months.

¹⁹⁵ For the (re)sale goods sector, 60% of peer expenditure reaches peer providers, and the figures are similar for the renting/sharing goods (65%), sharing/renting accommodation (62%), and odd jobs (63%)



Source: VVA analysis of Task 2 survey data, EC (2015). Provision of two online consumer surveys as support and evidence base to a Commission study: Identifying the main cross-border obstacles to the Digital Single Market and where they matter most.

The difference between peer consumer expenditure and peer provider revenue includes the revenue of the platform as well as any third-party fees, costs or charges included in the price peer consumers pay to the platform such as insurance costs, credit card or payment costs, tourist taxes, etc. These may vary across platforms, between sectors and individual transactions.

As with all economic estimates, there are a number of methodological limitations which could affect or explain the estimated difference between peer provider revenue and peer consumer expenditure. Notably, this concerns the potential misreporting of revenue and expenditure in the survey by respondents, and in particular underreporting by peer providers.

Despite limitations, a large share of the estimated EUR 10.61 billion is likely to represent platform revenues.

It is important to point out that, across all sectors, **median peer expenditure** accounts for 66-95% of median revenue (lowest in the (re)sale goods sector at 66%, and highest in the sharing/renting accommodation sector at 95%). This means that median revenue is between 66-95% the amount of peer expenditure, and consequently that between 5-34% of what a median peer consumer spend in P2P transactions does not reach the median peer provider. However, the total difference in estimated peer expenditure and revenues (see Figure 38 above) varies

between 61% and 81%, depending on the sector (61% of total peer expenditure reaches peer providers in the (re)sale goods sector, while 81% does so in the sharing/hiring rides sector). A notable discrepancy is seen in the sharing/renting accommodation sector, where the following figures are encountered:

- Median revenues account for 95% of median expenditure (a median peer provider earns almost as much as a median consumer spends);
- Total estimated revenues account for only 62% of total estimated expenditure (overall, the average peer provider only receives 62 cents for every euro spent by a peer consumer).

A PwC (2015) study¹⁹⁶, looking at five collaborative economy sectors¹⁹⁷, found that the European sharing economy had facilitated EUR 28 billion worth of transactions and generated EUR 4 billion in platform revenues in 2015. The PwC estimate excludes platforms in the (re)sale goods sector, which account for almost 70% of the EUR 10.61 billion difference in the present study. It should be noted that in this sector delivery charges are more likely to be part of consumer expenditure, but not of provider revenue. Without resale of goods, the total estimate of EUR 3.57bn platform revenue is slightly lower than but close to PwC's estimate, which covers more sectors of activity.

Both the PwC study and the present report find that online P2P platforms generate significant revenues for themselves. From a consumer policy perspective, this implies that these platforms act as traders and are responsible for the services they deliver to consumers. Some EU Member States such as the UK¹⁹⁸ specify that, if the P2P platform charges consumers for its services, it must "*treat the sales of third party e-services as if they were [its] own and declare the VAT due*".

To sum up, based on the economic model, there is a large gap between total estimated peer expenditure and total estimated peer revenues. A considerable portion of this difference consists of P2P platform revenues. However, further research would be necessary to disaggregate "non-peer revenues" and develop a full understanding of the share accruing to platforms and any potential third parties.

4.4 Summary of findings

This section has estimated the economic significance of P2P transactions in the EU28. The economic model used here relies on survey data from Task 2, which was carried out in 10 EU MS, extrapolating the data from the 10 EU MS to the entire EU28, based on the incidence rate of participation in P2P transactions and internet usage rates in each MS.

The model uses median values of peer expenditure and peer revenues to calculate EU-level total P2P expenditure (estimated at EUR 27.9 billion)

¹⁹⁶ PwC (2016). Assessing the size and presence of the collaborative economy in Europe.

¹⁹⁷ P2P accommodation, P2P transportation, on-demand household services, on-demand professional services and collaborative finance.

¹⁹⁸ <https://www.gov.uk/government/publications/vat-supplying-digital-services-to-private-consumers/vat-businesses-supplying-digital-services-to-private-consumers#digital-portals-platforms-gateways-and-marketplaces>

and P2P revenues (estimated at EUR 17.29 billion). Total non-peer revenues due to P2P transactions are therefore estimated to be worth EUR 10.61 billion.

More than half of the expenditure and revenue on platforms is driven by a small share of peers (approximately 10%). This may be explained by the presence of very active individuals, professionals or businesses on the platforms.

About half the 485 platforms examined were created before 2010. Almost 70% of the platforms in the (re)sale of goods sector were set up before 2010. Most platforms in the collaborative sectors (ridesharing ,oddjobs and renting/sharing of goods) were set up after 2012.

This section also examined the variation in P2P platform popularity, both across P2P markets as well as within them. Platform popularity is given by the number of daily unique visitors, as computed by the third-party website HypeStat.com. This study finds that the largest differences between platform popularity, by far, are observed among (re)sale goods platforms. On the other hand, the sector with the most homogeneous level of popularity across platforms is the odd jobs market. This study also finds that the (re)sale goods sector is the only sector not dominated by very small platforms: 23% of all platforms in the (re)sale sector in this study's sample have a number of daily unique visitors larger than 50,000, while in the four other sectors this percentage is 4% or less.

Finally, from the limited data available about profitability, it appears that there is no straight relationship between turnover, profit and platform user base. Thus, business strategies and business models are more likely to explain financial outcomes.

5 Conclusions

The aim of the report is to indicate the economic importance of P2P online markets in Europe and to contribute to the definition of the main P2P business models. These objectives are met by analysing the services and characteristics of 485 P2P platforms based in the EU and Norway, operationalising the Task 2 survey results and through a review of secondary data and publications.

The academic and policy literature analysed in this report suggests that **P2P transactions can raise consumer protection issues** due to aspects such as regulatory uncertainty on what rules apply to certain types of P2P transactions, lack of clarity as to the legal status of peer providers or data privacy concerns. As demonstrated by Brescia (2016), unlike conventional businesses that generate trust among consumers via complying with governmental regulations, platforms ensure trust through a variety of trust-building tools. Many platforms aim to encourage P2P transactions and address consumer protection issues through self-regulation, in particular through the trust-building services they provide to peers, such as peer review and rating systems. However, these systems may not always be sufficient to fully address the consumer issues identified in both the literature and in the consumer survey part of Task 2.

Consumer protection issues are particularly important considering that **P2P platforms have developed considerably in recent years**: 52% of the platforms in the sample (252) were created in or after 2010. According to the academic literature, the recent increase in P2P transactions is due to P2P market advantages such as lower prices, increased access to goods or environmental concerns. 81% of the platforms in the sample are small or medium-sized (below 10,000 daily visitors), and the literature suggests that P2P markets will continue to grow in the near future.

Service provision

Many platforms aim to address consumer issues through **self-regulatory approaches** via the services they provide to their peers. Platforms facilitate transactions and foster trust among peers through services before, during, and after P2P transactions are concluded. However, these services, and the trust they create may not always be sufficient to fully address the consumer issues identified in the literature.

This report finds that online P2P platforms offer a wide range of services, and that they differ significantly as to how comprehensive their service offer is. However, **most platform services focus on facilitating transactions** and not as much on providing peers with clarity and easy access to complaints handling mechanisms in case something goes wrong. As this report finds, most platform services are concentrated before the transaction phase, and much less after transactions occur.

The review of the services provided by 485 platforms finds that:

- **Pre-transaction services include** peer review and reputation systems (52%), information about applicable regulation and taxes (45%), and advice/rules on safety (48%). Platforms in the sharing/renting

accommodation and sharing/renting goods sectors provide fewer pre-transaction trust-building services like peer review systems or identity verification than platforms engaged in sharing/hiring rides, odd jobs or (re)sale of goods.

- **About half of platforms have peer review or peer rating systems.** Platforms facilitating the sharing/renting of accommodation and sharing/renting of goods provide fewer **pre-transaction** trust-building services like peer review systems or identity verification than platforms engaged in sharing/hiring rides, odd jobs and (re)sale goods.
- Platforms facilitating the sharing/hiring of rides tend to foster trust before the transaction occurs, whereas platforms in (re)sale of goods sector focus more on reactive monitoring to ensure trust.
- **Platform services in the transaction phase** include T&Cs for platform use – in 86% of cases –, payment services (55%) pricing guidance or price setting (22%). One third (35%) of platforms set T&Cs for P2P interactions. This share varies across the five sectors under study: 27% of platforms in the (re)sale goods sector, 15% in the Sharing/renting accommodation platforms and 17% sharing/renting goods platform.
- **Platform services in the post transactions phase focus on** complaints handling – in 53% of cases. Differences are also evident between sectors: while sharing/hiring rides platforms are more likely to offer insurance, (re)sale goods platforms engage more in monitoring of user behaviour and listings.

Consumer issues linked to platform service provision include:

- **Platforms do not systematically monitor users' compliance with platform rules:** only 30% of all platforms do so, which increases the risk of fraudulent activities. This varies from almost half of the (re)sale goods platforms to only 11% in the sharing/hiring rides sector.
- **Only one quarter of platforms have some form of mechanism to verify the identity of peers and only 1% of platforms provide criminal records checks.** Identity verification is more systematic in the sharing/hiring ride sector. The lack of certainty regarding other peers' identity may create safety issues or complications in case something goes wrong with the transaction.
- **A quarter of all platforms (24%) provide insurance to peers, either included in the price or against an additional charge.** This number is slightly higher in the sharing/hiring rides (31%) and the sharing/renting accommodation (26%) sectors, as potential damages can be higher than in other sectors.
- **Almost half of platforms (48%) do not have a peer review or rating system and no complaints handling mechanism (47%).**

- **Regarding data use and reuse, the study finds that there are gaps in transparency** in how data are used and who they are shared with, which might cause privacy issues for consumers.
- **There is a growing trend to provide services through mobile apps**, with newer platforms more likely to offer app accessibility than older ones. A third (32% of all platforms) provide such apps, but usage varies by market. Purchases via mobile apps will raise new issues and risks linked to the impact of location-based services, effective provision of information on limited capacity of mobile screens and provision of secure payment scheme, including authentication, to prevent unauthorised use.

Monetisation models

Platform business model are determined by the combination of different monetisation strategies and service offers:

- **Transaction fee-based models:** such platforms offer a wide range of services with a focus on pre-transaction services. Their aim is to encourage a maximum number of transactions through as many services as possible, indicating a high level of maturity and financial solidity.
- **Subscription fee-based models:** platforms using this model tend to rely more on pre-transaction services like peer review&reputation systems or identity verification, and less on post-transaction mechanisms like compliance monitoring or insurance.
- **Advertising/data-based models:** such platforms focus more on post-transaction services. There is less of a focus on trust-building, and they adopt more reactive, rather than proactive approaches to consumer protection.

Most often, advertising and data (re)use are used in combination with other monetisation models.

Across P2P markets, significant differences arise: (re)sale goods platforms tend to be more homogeneous and mostly use advertising (80% of market platforms) or data use/reuse (60%). The sharing/hiring rides market features the greatest diversity of monetisation models, while the remaining three P2P markets display moderate levels of heterogeneity.

The results of the screening of platform services and monetisation strategies are combined with data from case studies (Task 4) to develop a typology of three business models in the Final Report of this study.

Economic significance of P2P transactions

This report uses Task 2 survey results from 10 EU Member States to extrapolate median peer expenditure/revenues to the EU28-level. **The model estimates that total peer expenditure in the EU across the five sectors considered in this study is worth EUR 27.9 billion per year, while total peer revenues are estimated at EUR 17.29 billion. The difference of EUR 10.61 billion include platform revenues** but they may include also other costs (tourist tax, delivery costs, add-on services such as insurance).

The difference between peer consumer expenditure and peer providers revenue is **significantly higher in some markets than in others** and it varies between 61% and 81% (61% of total peer expenditure reaches peer providers in the (re)sale goods sector, while 81% does so in the sharing/hiring rides sector). The reason for such differences across sector could include e.g. delivery fees, product warranties in the (re)sale goods sector.

Peer spending is highest on (re)sale goods platforms (EUR 17.8 billion), and amongst collaborative platforms on sharing/renting accommodation platforms (EUR 6.6 billion). **Peer revenues** follow a similar path: peer providers on (re)sale goods platform are estimated to earn EUR 10.8 billion, sharing/renting accommodation providers earn EUR 4.1 billion, while in the other three sectors peer provider revenues lie at around EUR 800 million.

Expenditure and revenue on both collaborative and (re)sale of goods platforms are driven by a small share of peer consumers and peer providers. More than half of the revenue and expenditure is generated by 10% of peers. This skewedness may be explained by the presence of very active private sellers, or commercial and professional buyers and sellers who transact frequently on P2P markets.

The report finds large differences in size based on unique visitor numbers between P2P platforms (excluding apps) both between P2P markets and within them. The websites of (re)sale platforms are by far the most visited and it is in this sector where there are the largest differences in platform size and popularity. The overwhelming majority of sharing/hiring rides or odd jobs platforms (78% and 68% of platforms respectively) are small (defined as <500 daily unique visitors).

Finally, the Task 1 research found **large gaps concerning data availability on certain platform characteristics** such as financial records, liability or transparency in handling data. Further research into these fields would be beneficial to complement the findings of the present study.

6 Annexes

6.1 Annex 1.1: Country fiches

Country fiches are submitted as separate documents.

6.2 Annex 1.2: List of references

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6.3 Annex 1.3: Final list of case study platforms for Task 4

	Sector	Name
1	(Re)sale goods	eBay
2	(Re)sale goods	Wallapop
3	Sharing/renting goods	Peerby
4	Sharing/hiring rides	UberPop/Uber Pool
5	Sharing/hiring rides	BlaBlaCar
6	Sharing/hiring rides	easyCar Club
7	Sharing/renting accommodation	Wimdu
8	Sharing/renting accommodation	AirBnB
9	Odd jobs	Yoopies
10	Odd jobs	Nimber

6.4 Annex 1.4: List of platforms

The list of platforms is submitted as a separate document.

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