Data Descriptor

Data for Sustainable Platform Economy: Connections between Platform Models and Sustainable Development Goals

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Abstract: In recent years, the platform economy has been recognised by researchers and governments around the world for its potential to contribute to the sustainable development of society. Yet, platform economy cases such as Uber, Airbnb, and Deliveroo have created a huge controversy over their socioeconomic impact, while other alternative models have been associated with a new form of cooperativism. In parallel, the United Nations are advocating global sustainable development by promoting Sustainable Development Goals (SDGs), considering elements such as decent work, inclusive and sustainable economic growth, and fostering innovation. In any case, the SDGs have been also criticised for the lack of digital perspective. This dataset draws from two 2020 European projects' (DECODE and PLUS) data collections and presents the possibility to compare different platform economy models and their connections with the SDGs.

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Keywords: platform economy; sustainability; SDGs

1. Introduction

The emergence of the platform economy has become a priority for governments [1,2] due to its possible contribution to the sustainable development of society [3,4]. It has also become of great interest in the field of social sciences. At the same time, regarding their socioeconomic impact, there are different types of platform economy models. For example, platforms including Uber, Airbnb, and Deliveroo are provoking considerable discussion [1], due to being regarded as a new form of extractive capitalism or "platform capitalism" [5]. Although successful alternative models based on open knowledge and the social economy exist, usually shaped under the concept of "platform cooperativism" [6], they have received little research and policy attention.

The empirical analysis of the platform economy (except for paradigmatic cases such as Wikipedia) and its derived public discourse are, for the most part, concentrated on extractive global platforms [7,8]. In addition, studies of alternative models tend to focus on providing analysis frameworks [6,9], and few of them focus on empirical case analyses, only addressing paradigmatic projects including SMart [10] and Fairbnb [11,12]. Como et al. [13] performed an exploratory analysis on how cooperatives are implementing innovations in the platform economy. Additionally, Martinelli [14] recently discovered the potential of platform cooperatives in creating and promoting quality jobs.

Another matter of growing interest, although still hardly addressed in platform economy research, is the relationship with the global indicators formulated by the United

Nations' Sustainable Development Goals (SDGs). Some studies highlight the need to focus on the role of information and communications technology (ICT) in the SDGs' formulation, and therefore in shaping contemporary development. For example, Unwin [15] stated that ICT is not directly mentioned in any of the SDGs and is only mentioned in four out of 169 sustainability targets. Indeed, some studies recently pointed out that digital technologies are considered essential enablers of the circular economy, which contributes to the 12th SDG (sustainable consumption and production) [16]. In any case, while circular economy scholars have long lauded digital technologies such as platforms as key enablers, they have not fully explored the potentials of information systems for a circular economy and its connection with SDGs [17].

Fuster Morell et al. [18] argue that sustainable platform economy design can promote and contribute to the sustainable dimensions of SDGs, particularly in regard to its economic model, social responsibility, and impact. However, in the SDGs, data and governance dimensions are not represented. On the other hand, Laukkanen and Tura [19] explored different platform economy models and analysed their sustainable value creation potential and sustainability business principles, and compared them to the 17 SDGs [20].

Additionally, with some exceptions [16,21–23], the volume and quality of accessible open data for the detailed analysis of studies regarding the platform economy and SDGs are still complex due to a relevant lack of accessible datasets. This dataset and data descriptor represents an opportunity for a first approach to research data related to both the alternative characterisation of the platform economy and its relation to the 17 core SDGs (specifically, in how they are addressed by a total of 154 diverse platform economy projects). Our dataset (Figure 1) is based on an already developed theoretical framework [24], and its current shared version merges data from two previous EU projects: DECODE (https://www.decodeproject.eu/) and PLUS (https://project-plus.eu/), in which the authors have conducted studies that have been recently published and shared with the academic community in digital-related studies and the wider social sciences [25–28]. The analysis of both datasets is aligned with the approach of the newly launched European Data Strategy [29], which reinforces the access to data and the ability to use it as an essential element for innovation and growth, and the fostering of the Online Platforms Policy [30] as an important part of the digital economy.
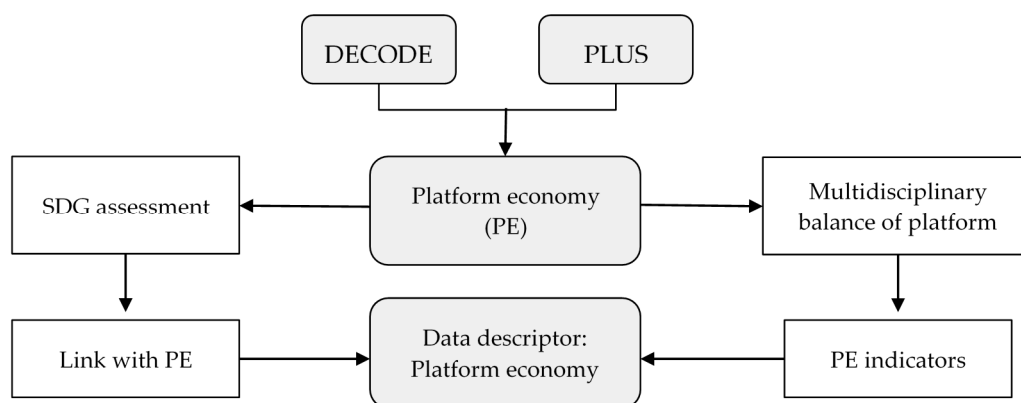

Figure 1. Data descriptor structure analysis. SDG: Sustainable Development Goal.

In the following section, the conceptualisation, the structure, and the methodology of both datasets are explained.

2. Methods

Our methodology is based on a multidisciplinary balance of the platform economy that considers three key two-headed dimensions of (1) governance and economic model, (2) socio-economic impact, and (3) data and technology policies [27] and how these three areas relate to global goals defined in the SDGs [18]. This multidisciplinary balance serves

as an analytical tool that can contribute to differentiate models and provide insights about their sustainability regarding the SDGs (Figure 2):
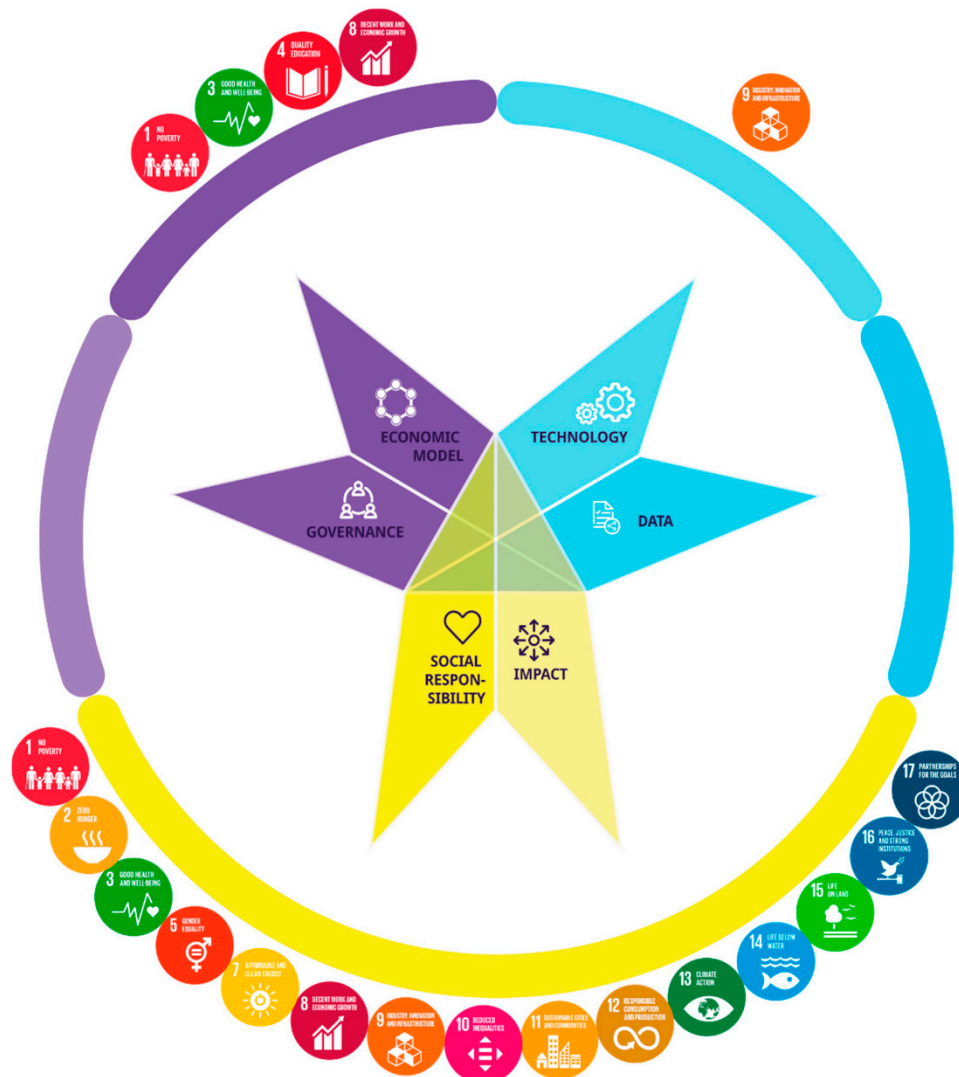

Figure 2. Connection between the SDGs and the democratic qualities of the platform economy [16].

(1) The governance subdimension examines platform provision governance (legal constitution, participation policies, and transparency) as well as platform interactional level governance (matching the grade in which users participate with platform functionalities). The economic subdimension addresses the relationship between social impact (labour rights, labour conditions, as well as growth type) and economic benefits (destination and distribution), while also considering the project's financial model and its economic sustainability. Democratic qualities of the platform economy that refer to economic models (income security, salary equality, job creation, working conditions, growth model, juridical recognition, earnings maximisation, right to log off, gender equality, health workers' safety, and workers' caring support) are primarily rooted in goal 8 (promotion of decent work for all, employment, and inclusive and sustainable economic growth), but these indicators are also related to goal 1 (end all forms of poverty everywhere), goal 3 (promotion of healthy lives and well-being for all), and SDG 4 (quality education).

(2) The openness of technological policies refers to technological infrastructures and software (considering its grade of reproducibility) that favours openness and freedom (categorising platform license type), and also connects to SDG 9 (foster innovation,

promote sustainable industrialisation, and build resilient infrastructure). Two platform knowledge policy elements were adopted in the mentioned framework: content (user-generated content license) and data (access to user-generated data), to examine the democratic sustainable qualities of a platform economy project.

(3) The social responsibility and impact dimension refers to responsibility or awareness toward negative implications of the platform economy, including social exclusion and inequalities. This dimension also relates to equal access to platforms regardless of social class, gender, and income. Social responsibility and impact also involves the common good of the city, compliance with health and safety standards, the impact of the platform economy in terms of the environment and policy, the protection of public space and human rights, and the preservation of inhabitants' rights to the city). This dimension relates to the majority of the SDGs, including goal 1 (end all forms of poverty everywhere), goal 2 (zero hunger), goal 3 (promote well-being and healthy lives for all), goal 5 (empower all women and girls and achieve gender equality), goal 7 (ensure access to sustainable, reliable, affordable, and modern energy), goal 8 (employment, decent work for all, and the promotion of inclusive and sustainable economic growth), goal 9 (foster innovation, promote sustainable industrialisation, and build resilient infrastructure), goal 10 (reduce inequality within and among countries), goal 11 (make cities safe, inclusive, sustainable, and resilient), goal 12 (ensure sustainable production and consumption patterns), goal 13 (take urgent action to fight climate change and its implications), goal 14 (conserve and sustainably use the seas, oceans, and marine resources), goal 15 (combat desertification, sustainably manage forests, halt and reverse land degradation, halt biodiversity loss), goal 16 (promote just, peaceful, and inclusive societies), and goal 17 (revitalise the global partnership for sustainable development).

The methodology for the first part of the dataset consisted of a parallel web collection process which involved three researchers applying a summative content analysis [31], based on a codebook with questions regarding the three key dimensions described above. The coding was applied independently from each researcher to 154 existing platform economy projects, based on the specific information and features provided by each platform website ("About us", "Mission", "FAQs" pages; instructions for users; codes of conduct if existing; and other publicly available legal or governance-related information), as well as other sources of information depending on the case (references on previous literature, Wikipedia articles, social media channels, etc.).

Additionally, the dataset includes 17 additional descriptors related to each of the 17 SDGs as described on the official United Nations webpage, which were also coded independently by two different researchers based on the same sources as mentioned above (via each platform website or other related online sources).

3. Data Description

The following list describes the different values of the fields in the dataset. In general terms, and except where indicated, the binary codification (0–1) responds to our main conceptual distinction regarding platforms with a tendency toward platform cooperativism models (1) or platform capitalism models (0), as detailed in the previous sections.

3.1. Platform Main Descriptors

- ID: Project identification number.
- NAME: Name of the digital platform, as officially used on the project website.
- URL: Platform's main website URL.
- ACTIVE: Indicates whether the platform's main activity is active (1) or has stopped its operations (0).

3.2. Governance-Related Descriptors

- PLATFORM OBJECTIVES: Indicates if the platform expressed objectives, as stated on its main slogan or FAQs section, points explicitly to forms of open collective engagement (1) or not (0).
- INTERACTION TYPE: Indicates if the main platform activity is oriented explicitly or implicitly to alternative economics related to the commons and Peer to Peer (P2P) values (1) or towards private market and liberal economy values (0).
- USERS INTERACTION: Indicates if users of the platform (usually under registration) can be part of groups and/or communicate with each other autonomously and/or horizontally (1) or if, instead, the platform mainly establishes hierarchical and centralised communication systems (0).
- LEGAL ENTITY: Indicates if the type of entity behind the platform has a collective governance model derived from its constitution (as a nonprofit, cooperative, public institution, etc.) (1) or, instead, a private and/or for-profit character (framed under a commercial legal entity) (0).

3.3. Economic Model and Impact Descriptors

- SERVICES PROVISION: Related to how platform users or workers provide the services or activity, it indicates if oriented to cloud work (where the platform is an interaction infrastructure for open collaboration) (1) or instead oriented to gig work (where it is based on monitoring user behaviours as a key part of the platform's marketplace) (0).
- STOCK EXCHANGE: Regarding the economic impact dimensions of the digital platform, it indicates if it operates in the stock exchange market (0) or not (1).
- GOOGLE SEARCHES: This nonbinary indicator shows the number of all-time Google search results regarding the digital platform name or URL.
- DIGITAL REPUTATION: This nonbinary indicator shows the aggregated value of three subindicators regarding outreach on social media, calculating platform results regarding Twitter, Facebook, and Instagram followers.
- LANGUAGE: Indicates if the platform's main features and information are translated to other languages for better inclusiveness and diversity (1) or instead appear in just one language (usually English or the local language) (0).

3.4. Data and Technology Policy Descriptors

- DIGITALISATION LEVEL: Indicates if the platform is mainly native or digital-based, with a high percentage of online operability (1) or just digitally supported or partially aided by online features (0).
- CONTENT LICENSE: Indicates if the platform's user-generated content has any type of copyleft or open license (1) or instead mainly copyright-protected or with other types of privative licenses (0).
- DATA LICENSE: Indicates if the platform's user-generated data has a specific open or copyleft license (1) or not (0).
- DATA EXPORT: Indicates if the data export features of the generated resource are technically facilitated, with open mechanisms for data copying or downloading (1) or there is a nonopen policy regarding the platform's available data (0).
- PLATFORM CODE (7.1): Indicates if the platform source code is copyleft and made available online for third parties, via the website or repositories such as GitHub, (1) or not (0).

3.5. Sustainable Development Goals Associated with Each Platform

- SDG1: End all forms of poverty everywhere.
- SDG2: End hunger, achieve food security, improve nutrition, and promote sustainable agriculture.
- SDG3: Promote well-being and ensure healthy lives for all.

- SDG4: Promote lifelong learning opportunities and ensure inclusive and equitable quality education for all.
- SDG5: Empower all women and girls and achieve gender equality.
- SDG6: Ensure availability and sustainable management of water and sanitation for all.
- SDG7: Ensure access to sustainable, reliable, affordable, and modern energy for all.
- SDG8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all.
- SDG9: Foster innovation, promote inclusive and sustainable industrialisation, and build resilient infrastructure.
- SDG10: Reduce inequality within and among countries.
- SDG11: Make cities and human settlements sustainable, safe, inclusive, and resilient.
- SDG12: Ensure sustainable production and consumption patterns.
- SDG13: Take urgent action to combat climate change and its impacts.
- SDG14: Conserve and sustainably use the seas, oceans, and marine resources for sustainable development.

In this case, if a project tends to work in the improvement of a SDG, it is considered an accomplishment (1), while if the platform does not focus on SDGs, it is assessed as not an accomplishment (0).

4. Technical Validation

To obtain qualitative data, general impressions about study cases were noted in a field book.

The quality of the data was controlled throughout; two researchers verified the codebook indicators against a set of cases and corroborated this information with the main data collector. To further ensure data reliability, the data collector examined the data in order to check for possible mistakes and errors. Following this, the collector adapted some of the indicators to include previously unconsidered answer options.

4.1. Platform Economy Characterisation Data

Based on the data collection of the twelve platform economy indicators (Platform objectives, Interaction type, Users interaction, Legal entity, Services provision, Stock exchange, Language, Digitalisation level, Content license, Data license, Data export, and Platform code), we performed two data validation analysis: (a) phi correlation analysis and (b) latent class model analysis.

4.1.1. Phi Correlation Analysis

The phi correlation analysis (Table 1) shows the correlation between each couple of dichotomous variables, while the distance matrix (Table 2) contains the distances, taken pairwise, between the elements of the set.

The results show numerous correlations between the variables. For example, regarding platform objectives, pointing explicitly or not to open collective engagement is correlated with almost the rest of the indicators. Thus, the analysis reveals that a platform that promotes collective engagement also favours open data and takes advantage of open code. Moreover, the phi correlation analysis indicates that when the main platform activity is oriented explicitly or implicitly to alternative economics related to the commons and P2P values, it also favours open content and open data. In addition, behind the platform provision, there is a type of nonprofit organisation (public administration, foundation, cooperative, or association) that is not interested in speculative financial return. Another interesting element is that diverse language usage and level of digitalisation are not correlated with the rest of the indicators. On the one hand, this indicates that commons-oriented platforms are more local than the for-profit platforms, which operate more globally. On the other hand, it indicates that commons-oriented platforms act like a support for an offline activity more than a native or digital-based project.

4.1.2. Latent Class Analysis

After identifying the strong correlations among the different variables studied, a latent class analysis of the twelve indicators was performed (Table 3) to account for the type of platforms and their associated variables.

Results of this latent class analysis (Figure 3) suggest the possibility to distinguish between three types of platforms:

- The main group of platforms (0.4441) have a strong commons-oriented approach to the governance model (collective engagement, commons and P2P values, horizontal communication among members, and democratic organisations) and promote open collaboration. These types of entities do not have any speculative behaviour. Despite their high level of digitalisation, they do not use open content and data licenses, do not take advantage of open-source code, and do not allow users to download data.
- The second type of platforms (0.3224) do not promote collective engagement; their activity is focused on private market and liberal economy values, establishing hierarchical and centralised communication systems. The for-profit companies behind these platforms have a high rate of speculative sense (for example, they usually participate in the stock exchange market). Despite the projects being digitally native, these platforms do not promote open data nor open content.
- The third type of platforms (0.2335) have a high level of commons-oriented governance, as well as a nonprofit economic approach. Unlike the first group of platforms, this third type of platforms also promotes open commons.
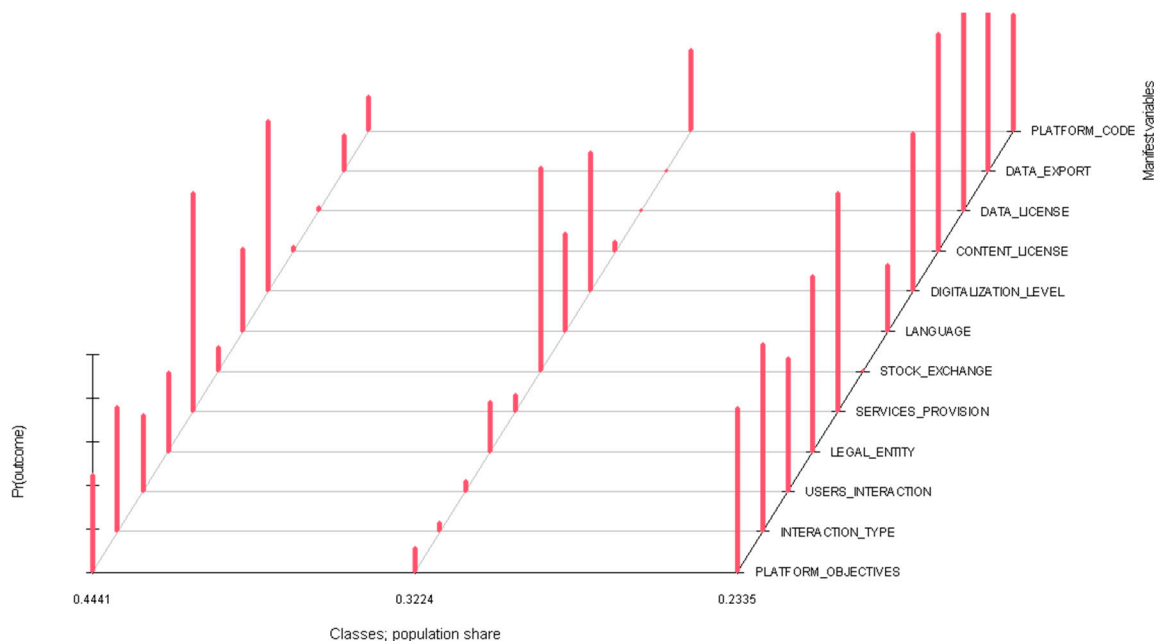

Figure 3. Column chart representation of latent classes' analysis.

4.2. Data for Connections between the Platform Economy and SDGs

The independent analysis provided by two different researchers crossing the 154 cases with the descriptors relating to each of the 17 SDGs indicates small differences between them (Figure 4). The difference average is 8.19%, and in eight out of 17 descriptors, the grade of coincidence is above 98%.

Table 1. Phi correlation. A (Platform objectives), B (Interaction type); C (Users interaction); D (Legal entity); E (Services provision); F (Stock exchange); G (Language); H (Digitalisation level); I (Content license); J (Data license); K (Data export), L (Platform code).

	Phi Correlation											
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**
A	1.000											
B	0.493	1.000										
C	0.410	0.269	1.000									
D	0.492	0.306	0.418	1.000								
E	0.399	0.555	0.378	0.242	1.000							
F	−0.335	−0.525	−0.289	−0.187	−0.799	1.000						
G	−0.140	−0.096	−0.127	−0.160	−0.040	0.093	1.000					
H	0.017	0.061	−0.081	−0.259	0.163	−0.119	0.252	1.000				
I	0.366	0.442	0.382	0.470	0.315	−0.334	−0.060	−0.070	1.000			
J	0.367	0.448	0.376	0.443	0.367	−0.381	−0.099	0.011	0.931	1.000		
K	0.441	0.424	0.337	0.423	0.387	−0.435	−0.162	0.006	0.643	0.672	1.000	
L	0.238	0.072	0.213	0.362	−0.112	0.093	−0.069	−0.206	0.285	0.245	0.433	1.000

Table 2. Distance matrix. A (Platform objectives), B (Interaction type); C (Users interaction); D (Legal entity); E (Services provision); F (Stock exchange); G (Language); H (Digitalization level); I (Content license); J (Data license); K (Data export), L (Platform code).

	Distance Matrix | Phi *p*-Value Test											
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**
A	1.000											
B	0.000	1.000										
C	0.000	0.001	1.000									
D	0.000	0.000	0.000	1.000								
E	0.000	0.000	0.000	0.003	1.000							
F	0.000	0.000	0.000	0.020	0.000	1.000						
G	0.083	0.234	0.116	0.048	0.618	0.250	1.000					
H	0.829	0.449	0.314	0.001	0.043	0.140	0.002	1.000				
I	0.000	0.000	0.000	0.000	0.000	0.000	0.459	0.383	1.000			
J	0.000	0.000	0.000	0.000	0.000	0.000	0.218	0.889	0.000	1.000		
K	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.945	0.000	0.000	1.000	
L	0.003	0.372	0.008	0.000	0.164	0.248	0.392	0.011	0.000	0.002	0.000	1.000

Table 3. Latent class analysis result.

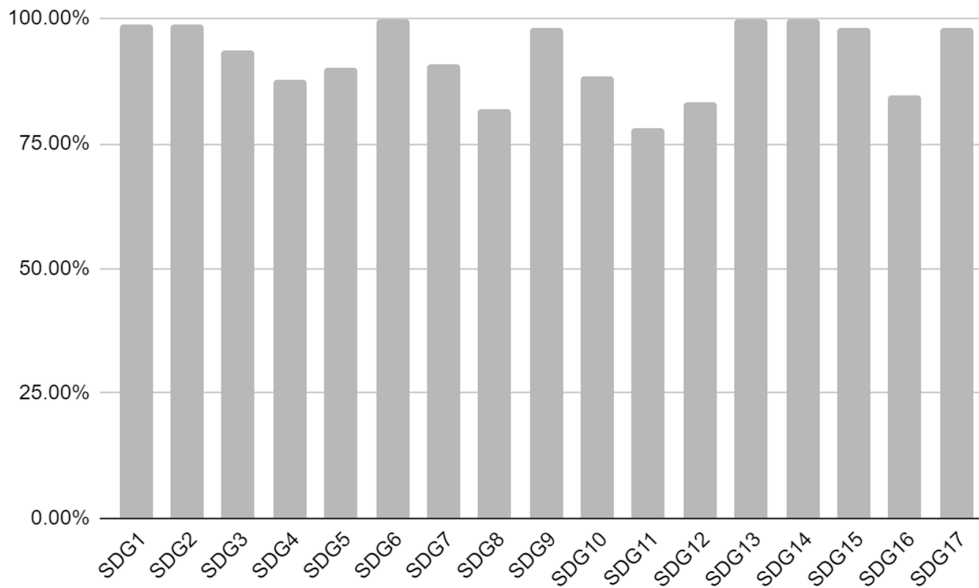| KERRYPNX	Platform Objectives	Interaction Type	Users Interaction	Legal Entity	Services Provision	Stock Exchange	Language	Digitalization Level	Content License	Data License	Data Export	Platform Code
	0　1	0　1	0　1	0　1	0　1	0　1	0　1	0　1	0　1	0　1	0　1	0　1
class 1:	0.5522　0.4478	0.4294　0.5706	0.6524　0.3476	0.6403　0.3597	0.0000　1.0000	0.8886　0.1114	0.6226　0.3774	0.2188　0.7812	0.9848　0.0152	0.9847　0.0153	0.8391　0.1609	0.8446　0.1554
class 2:	0.8915　0.1085	0.9594　0.0406	0.9548　0.0452	0.7702　0.2298	0.9264　0.0736	0.0659　0.9341	0.5529　0.4471	0.3637　0.6363	0.9597　0.0403	1.0000　0.0000	1.0000　0.0000	0.6300　0.3700
class 3:	0.2493　0.7507	0.1389　0.8611	0.3885　0.6115	0.1937　0.8063	0.0000　1.0000	1.0000　0.0000	0.6943　0.3057	0.2775　0.7225	0.0000　1.0000	0.0000　1.0000	0.1935　0.8065	0.4716　0.5284

Figure 4. Percentage of coincidence between two independent SDGs analyses.

The results of the connections between platform economy indicators and SDGs (Figure 5) also shows the lack of connections between both. Only SDG 9 (Infrastructure, Innovation, and Industry) is linked with almost all platforms analysed. The other three are in the range between 25% and 50% (SDG 8: Economic Growth and Decent Work; SDG 11: Sustainable Cities, and Communities; and SDGs 12: Responsible Production and Consumption), while 10 out of 17 SDGs are linked with platform economy cases in 3% or fewer of cases.
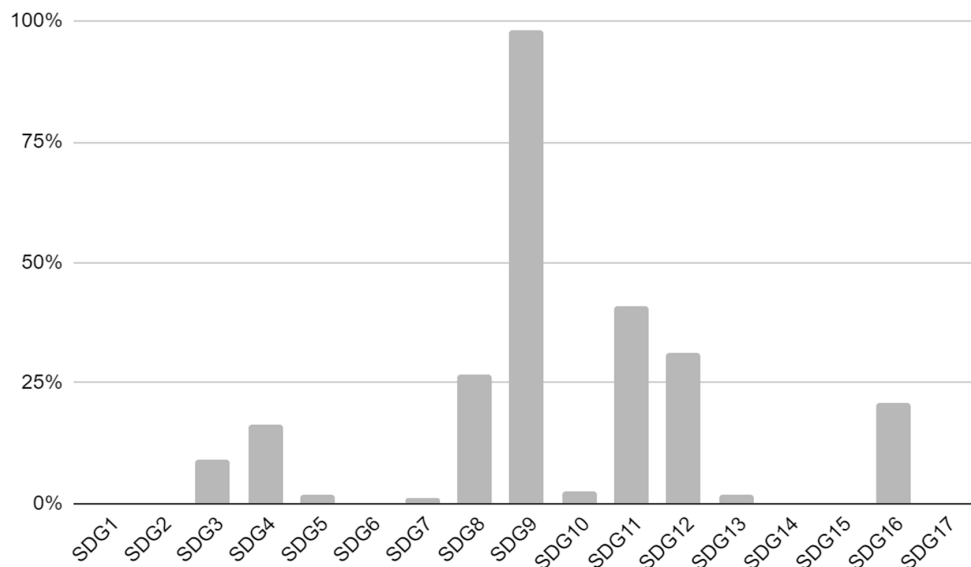
Figure 5. Connections between the platform economy and SDGs.

5. Conclusions

One of the main conclusions is that it is not possible to refer to the platform economy as something homogeneous. A line of results indicates three types of platforms, distinguishing from the ones which consider cooperative principles [6] and open commons

models [9] to the ones that can be considered as new forms of what has been called platform capitalism [5]. In the middle of this spectrum, there are several nuances of characteristics, which usually tend to commons-oriented platform models or, instead, platform capitalism ones. Our initial analysis also shows that the type of platforms located in the midpoint between the more commons-oriented ones and the platform capitalism ones represents the main group. Thus, despite the wider attention and focus from the media that is more usual for platform capitalism models, the commons-oriented ones can be seen as a significant alternative. This element reinforces previous research about PE characterisation and its implications [18,27].

Another important element of this derived analysis is that the interrelationship between SDGs and the platform economy is uneven. Two elements can explain this result. On the one hand, the limited digital perspective of the SDGs in its own definition [15], and on the other hand, the current stage of the platform economy, still expanding, which does not yet cover all the challenges defined in the SDGs.

To sum up, the analysis performed in this research may contribute to the development of the European data strategy [29] aiming at making the EU a leader in a data-driven society and to the platform economy type of data management implemented in EU online platforms [30]. According to the results of this investigation, it is important to consider the different types of platforms' characterizations and implications considering the SDGs. Thus, it is important to promote platforms that facilitate a democratic data management. All in all, the majority of platforms that promote open data and open technologies are generating a better social impact. At the same time, it is important to note that a better digital perspective is needed in each SDG. Thus, the platform economy should provide new solutions to cover as a whole the challenges described in the SDGs.

In this sense, the connection between the data generated by the platform economy and SDGs may become a relevant research area in the coming years.

References

1. Codagnone, C.; Abadie, F.; Biagi, F. *Institute for Prospective Technological Studies. The Future of Work in the "Sharing Economy"*; Publications Office: Luxembourg, 2016.
2. Hernández Bataller, B. *Collaborative or Participatory Consumption: A Sustainable Model for the 21st Century*; European Economic and Social Committee: Brussels, Belgium, 2014.

3.   Botsman, R.; Rogers, R. *What's Mine Is Yours: How Collaborative Consumption Is Changing the Way We Live, Rev. and updated ed.*; Collins: London, UK, 2011.

4.   Cohen, B.; Muñoz, P. Sharing Cities and Sustainable Consumption and Production: Towards an Integrated Framework. *J. Clean. Prod.* **2016**, *134*, 87–97. [CrossRef]

5.   Srnicek, N. *Platform Capitalism*; Polity: Cambridge, UK; Malden, MA, USA, 2016.

6.   Scholz, T. *Platform Cooperativism. Challenging the Corporate Sharing Economy.*; Rosa Luxemburg Stiftung: New York, NY, USA, 2016.

7.   Vandaele, K.; Piasna, A.; Drahokoupil, J. 'Algorithm Breakers' Are Not a Different 'Species': Attitudes towards Trade Unions of Deliveroo Riders in Belgium. 2019. Available online: https://www.etui.org/publications/working-papers/algorithm-breakers-are-not-a-different-species-attitudes-towards-trade-unions-of-deliveroo-riders-in-belgium (accessed on 10 December 2020).

8.   Cheng, M.; Foley, C. The Sharing Economy and Digital Discrimination: The Case of Airbnb. *Int. J. Hosp. Manag.* **2018**, *70*, 95–98. [CrossRef]

9.   Bauwens, M.; Kostakis, V. Towards a New Reconfiguration among the State, Civil Society and the Market. *J. Peer Prod.* **2015**, *7*, 1–6.

10.   Charles, J.; Ferreras, I.; Lamine, A. A Freelancers' Cooperative as a Case of Democratic Institutional Experimentation for Better Work: A Case Study of SMart-Belgium. *Transf. Eur. Rev. Labour Res.* **2020**, *26*, 157–174. [CrossRef]

11.   Petruzzi, M.A.; Sheppard, V.; Marques, C. Positioning Airbnb and Fairbnb in the Sharing-Exchange Continuum. *Curr. Issues Tour.* **2019**, 1–4. [CrossRef]

12.   Foramitti, J.; Varvarousis, A.; Kallis, G. Transition within a Transition: How Cooperative Platforms Want to Change the Sharing Economy. *Sustain. Sci.* **2020**, *15*, 1185–1197. [CrossRef]

13.   Como, E.; Mathis, A.; Tognetti, M.; Rapisardi, A. *Cooperative Platforms in a European Landscape: An Exploratory Study*; ISIRC: Glasgow, UK, 2016; p. 35.

14.   Martinelli, F.; Bozzoni, S.; Caroli, S.; Tamascelli, F.; Guerini, G. Platform Cooperativism in Italy and in Europe. 2019, p. 28. Available online: https://ideas.repec.org/p/crc/wpaper/1927.html (accessed on 10 December 2020).

15.   Unwin, T. ICTs and The Failure of The Sustainable Development Goals. Available online: https://unwin.wordpress.com/2015/08/05/icts-and-the-failure-of-the-sustainable-development-goals/ (accessed on 7 May 2020).

16.   Kristoffersen, E.; Blomsma, F.; Mikalef, P.; Li, J. The Smart Circular Economy: A Digital-Enabled Circular Strategies Framework for Manufacturing Companies. *J. Bus. Res.* **2020**, *120*, 241–261. [CrossRef]

17.   Zeiss, R.; Ixmeier, A.; Recker, J.; Kranz, J. Mobilising Information Systems Scholarship for a Circular Economy: Review, Synthesis, and Directions for Future Research. *Inf. Syst. J.* **2021**, *31*, 148–183. [CrossRef]

18.   Fuster Morell, M.; Espelt, R.; Renau Cano, M. Sustainable Platform Economy: Connections with the Sustainable Development Goals. *Sustainability* **2020**, *12*, 7640. [CrossRef]

19.   Laukkanen, M.; Tura, N. The Potential of Sharing Economy Business Models for Sustainable Value Creation. *J. Clean. Prod.* **2020**, *253*, 120004. [CrossRef]

20.   Kurucz, E.C.; Colbert, B.A.; Lüdeke-Freund, F.; Upward, A.; Willard, B. Relational Leadership for Strategic Sustainability: Practices and Capabilities to Advance the Design and Assessment of Sustainable Business Models. *J. Clean. Prod.* **2017**, *140*, 189–204. [CrossRef]

21.   Mi, Z.; Coffman, D. The Sharing Economy Promotes Sustainable Societies. *Nat. Commun.* **2019**, *10*, 1214. [CrossRef] [PubMed]

22.   Gössling, S.; Michael Hall, C. Sharing versus Collaborative Economy: How to Align ICT Developments and the SDGs in Tourism? *J. Sustain. Tour.* **2019**, *27*, 74–96. [CrossRef]

23.   Govindan, K.; Shankar, K.M.; Kannan, D. Achieving Sustainable Development Goals through Identifying and Analyzing Barriers to Industrial Sharing Economy: A Framework Development. *Int. J. Prod. Econ.* **2020**, *227*, 107575. [CrossRef]

24.   Fuster Morell, M. (Ed.) *Sharing Cities: A Worldwide Cities Overview on Platform Economy Policies with a Focus on Barcelona*; Sehen-Editorial UOC: Barcelona, Spain, 2018.

25.   Fuster Morell, M.; Carballa Smichowski, B.; Smorto, G.; Espelt, R.; Imperatore, P.; Rebordosa, M.; Rocas, M.; Rodríguez, N.; Senabre, E.; Ciurcina, M. *Multidisciplinary Framework on Commons Collaborative Economy*; DECODE: Barcelona, Spain, 2017; p. 145.

26.   Fuster Morell, M.; Espelt, R. A Framework for Assessing Democratic Qualities in Collaborative Economy Platforms: Analysis of 10 Cases in Barcelona. *Urban Sci.* **2018**, *2*, 61. [CrossRef]

27.   Fuster Morell, M.; Espelt, R. A Framework to Assess the Sustainability of Platform Economy: The Case of Barcelona Ecosystem. *Sustainability* **2019**, *11*, 6450. [CrossRef]

28.   Fuster Morell, M.; Espelt, R. How Much Are Digital Platforms Based on Open Collaboration? An Analysis of Technological and Knowledge Practices and Their Implications for the Platform Governance of a Sample of 100 Cases of Collaborative Digital Platforms in Barcelona. In Proceedings of the 14th International Symposium on Open Collaboration—OpenSym '18, Paris, France, 22–24 August 2018; ACM Press: New York, NY, USA, 2018; pp. 1–5. [CrossRef]

29.   European Commission. European Data Strategy. Available online: https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy_en (accessed on 19 February 2020).

30.   European Commission. Online Platforms. *Shaping Europe's Digital Future—European Commission*. Available online: https://ec.europa.eu/digital-single-market/en/online-platforms (accessed on 24 September 2015).

31.   Hsieh, H.-F.; Shannon, S.E. Three Approaches to Qualitative Content Analysis. *Qual. Health Res.* **2005**, *15*, 1277–1288. [CrossRef] [PubMed]