

## THE GEOGRAPHY OF THE SHARING ECONOMY IN EUROPE

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### **Biographical Notes**

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## **Abstract**

The sharing economy, intended as the creation of new markets for idle resources managed by digital intermediary platforms, is spreading in most economies. This paper offers new evidence on the geography of this phenomenon in the NUTS2 regions of the EU27 + UK by proposing a methodology to identify its stages and intensity of development. Results suggest that the sharing economy develops unevenly across countries and across regions, highlighting exceptional cases of mismatch between the intensity of the sharing economy and the most favourable socio-economic context conditions and warning against the possible detrimental effects of its development for wage inequalities.

**Keywords:** sharing economy, platforms, EU regions

**JEL Classification:** O31; O33; R11

## **1. Introduction**

The advent of digital platforms and the switch to online markets as primary locus of market transactions has sizeably widened the opportunities and choices of consumers to buy a product and/or a service (Capello and Lenzi, 2021a). For example, if a person needs a car, “he can buy a second-hand car using a website (e.g. Ebay), he can rent a car on a car-rental company website (e.g. Herzt or Car2Go), he can hire on-demand an individual to drive on his place using a site (e.g. Uber), he can rent a car from a private individual (e.g. Relayrides)” (Frenken et al., 2015, p. 5).

This transformative process has received increasing attention in the literature. However, the complexity of the phenomenon under examination has opened to a variety, if not mushrooming, of definitions, labels, and concepts so to generate a semantic confusion (Belk, 2007). This confusion is not intentional, nor it is misplaced. As it is usually the case when one is in front of a new and rapidly evolving phenomenon, it is not easy to trace precise conceptual boundaries and clearly separate out alternative situations. Efforts exist in this respect, with some authors trying to identify different types of platforms on the basis of the services offered (e.g. platforms for platforms, platforms mediating work, retail platforms, etc...) (Kenney and Zysman, 2016), others using the function played by the platform (e.g. platforms facilitating durable goods to be exploited more efficiently, platforms to share assets, etc...) (Schor, 2016). This gave rise to a proliferation of names to indicate the radical changes in place and those activities subject to this increasing process of transformation, such as gig economy, platform capitalism (Srnicsek, 2016), sharing economy (Schor, 2016), collaborative consumption (Botsman and Rogers, 2010), multi-sided markets (Evans and Schmalensee, 2016), or common-based peer production (Benkler, 2002).

The conceptual taxonomy developed by Capello and Lenzi (2021a, 2021b) offers some steps forward in this direction by typifying different modes of value creation, depending on the actors

involved, the role of digital platforms in market exchanges, the contribution of the different actors to value creation, the amount of value created online and how value is distributed among the different actors. One of the main categories identified in this framework is the so-called *sharing economy*.

Consistent with the literature, the label sharing economy, in this work, is associated with the creation of new markets for under-utilised, idle, assets (Frenken and Schor, 2017). The sharing economy can therefore be defined as an economy that generates “value in taking under-utilised assets and making them accessible on-line to a community, leading to a reduced need for ownership” (Stephany, 2015, p. 205), or as that of “on-line platforms that help people share access to assets, resources, time and skills” (Wosskow, 2014, p. 13). Three main aspects characterize the sharing economy: consumer to consumer transactions, temporary access to the exchanged resources and commerce of physical goods (Frenken and Schor, 2017). The unclosed possibility of accessing a product or service without necessarily owning the underlying asset, not only grants a lower-priced exchange but also reduces the dependency on ownership allowing a re-allocation of goods that would have otherwise remained unsold (Petropoulos, 2017). As highlighted by the European Parliament report titled *An economic review on the Collaborative Economy*, there is evidence of multi-billion gains that Europe can enjoy from this sharing practices. However, and especially focusing on specific sectors such as ride-sharing or short-term accommodation, the potential beneficial economic effects come at a cost. In fact, the operation of technology-based platforms facilitating consumer to consumer interactions might have detrimental effects on traditional incumbent businesses (Petropoulos, 2016). Furthermore, either driven by this possible crowding-out effect of long-established operators or by the uncertainty and precarious labour conditions potentially promoted by the platforms (e.g, gig-economy), adverse effects might concern labour security and inequalities (Codagnone and Martens, 2016). It is worth noticing that, as highlighted by Rojanakit et al. (2022), different areas and regions, according to their sociocultural, technological, political, economic and legal contexts, are differently influenced by the effects of the sharing economy. So far, to the best of our knowledge, there has been both little empirical evidence on the consequences of sharing economy on European economies and little debate on geographical and territorial differences.

In the attempt of taking a first step towards an empirically based discussion on the potential impacts of the sharing economy on local economic systems, this paper aims at offering an empirical measurement of the sharing economy and at describing its geography in Europe. By identifying the primary actors involved in the sharing economy and by unpacking the main channels of value creation and the final value distribution balance, this effort improves our understanding of the positive and negative effects the sharing economy may exert in different territorial contexts.

The rest of the paper is organised as follows. The next section shortly reviews the academic debate on the sharing economy with the goal of overcoming superficial if not misleading readings of this phenomenon. Section 3 proposes an operationalisation of the sharing economy in Europe and section 4 discusses the empirical evidence emerging from the mapping of the sharing economy in European NUTS2 regions. Some final reflections on the possible socio-economic effects of the sharing economy conclude the paper, opening to future research directions.

## **2. Literature review**

The sharing economy is commonly defined as a situation in which idle resources existing in the economy (e.g. a spare seat in a car, a spare bedroom, spare time) are made temporarily accessible to other users upon payment, on the basis of a peer-to-peer exchange. The owner of the resource can exchange its excess capacity, which in an offline situation would have had no value. New product and service exchanges take place by exploiting existing resources, i.e. the volume of transactions, and thus value creation, increases keeping assets and resources constant.

The sharing economy involves trilateral transactions, characterised by the exchange of products, services or contents through digital intermediaries (Schor, 2016).

A key characteristic of the sharing economy is that it is based on typical consumer-to-consumer transactions through which consumers share and/or exchange their assets. Specifically, digital platforms allow the creation of a market for an idle resource.

In this respect, intermediary digital platforms play the role of matchmaking. Intermediaries own the data on the providers on the one side and the users on the other, enabling them to match demand and supply rapidly and in a cost-efficient way. Moreover, intermediary platforms can open new markets for new services and enlarge their market shares through users' subscriptions and selling advertisement space. Digital platforms also rely on the high speed, low transactions and search costs, i.e. on selling an efficient and reliable intermediary service. This cost abatement is achieved by guaranteeing speed in finding the customised service, reliability in third parties, and efficiency in contractual arrangements. For example, large sharing platforms such as BlaBlaCar, Home Exchange or Love Home Swap manage billions of data about people's travels and availability of second houses so to match supply and demand of these spare resources; on their websites, individuals can offer his/her idle capacity. Such platforms make a free place in a car or unoccupied houses obtaining a value through car-sharing or home-sharing practices. People can share journeys to the same destination, earning from spare places in cars, or can exchange unutilised houses.

The immediate positive effect is the drastic enlargement of the size of the market, leading to surplus increases. In fact, transaction costs of lending and renting have been reduced, with the search

for the products and the arrangements of the contract being less costly and more timely (Frenken and Schor, 2017). Moreover, digital social sanctions such as bad rating (even if known as being inflated and not very accurate) or reputation on the platform itself offering the service allow keeping under control the risks of free riding behaviours in lending houses or cars to strangers. For the sake of its own business, the platform guarantees the fulfilment of the contract, and the quality of the transaction. Reputational mechanisms represent an additional source of market size expansion.

Yet, sharing idle capacity is a practice that has not been invented in the digital era. People are used to lending or renting products from others (Frenken, 2017). However, this used to take place among trusted people, among relatives or friends, and in any case among people who know each other very well. In most cases, this sharing takes place for free. What is new in this modern form of sharing economy is that this activity creates value by sharing idle capacity among people who do not know each other at all, what has been called ‘stranger sharing’ (Schor, 2016).

The expansion of the boundaries of the sharing circles has encouraged a misconception of the word sharing, wrongly interpreted as sharing with others because of the social and altruistic nature of mankind and not for financial remuneration (Belk, 2007). Importantly, the identification of the sharing economy as a no value exchange is self-propelled by digital platforms because of the positive symbolic message and effects it generates (Frenken and Schor, 2017). Moreover, the extensive use or reuse of resources, such as a free place in a car or a second house, have been interpreted as a remedy for a hyper-consumerist culture and a possible way to activate circular economy models (Schor et al., 2015).

Instead, everything ‘shared’ in the sharing economy has an economic value. As Frenken and Schor (2017, p. 4) claim, “a good definition of sharing economy is an economy where consumers grant each other temporary access to under-utilized assets (‘idle capacity’), possibly for money”.

The creation of economic value has also distributional consequences in that the value created through online transactions is distributed among the three players acting on the platform: providers, end users and the intermediary platform.

Providers obtain extra earnings and users lower prices (e.g. the cost reduction of travel and accommodation for a holiday), with a very low risk of free riding behaviours, because of fear of social sanctions such as bad rating or loss of reputation on the platform (Frenken and Schor, 2017). These exchanges, therefore, allow obtaining a utility increase. The advantages obtained for providers and final users of the resources enormously amplify the volume of transactions favouring disproportionate gains for digital intermediaries. The last ones certainly obtain the largest share through the creation of a two-sided market, by managing the information associated with the idle resources. Their control on the platform and on its data are the source of their profits. Intermediaries can generate value by

simplifying and accelerating transactions, as well as by lowering their costs for the parties it connects. As the two sides of the network grow, successful platforms can scale up. Users, seeing a larger potential marketplace, will then pay a higher price to access the platform, increasing the intermediaries' profits.

Overall, on the one hand, proponents of the sharing economy recognize the improved economic efficiency led by the reduction of frictions that cause capacity to be underutilized (Barron et al., 2017) and highlight the benefits for consumers and for the whole economy. Positive spillovers stemming from the entry of digital platforms into traditional markets derive from the competitive pressure that might act as a trigger for new investments in innovation made by offline firms in order to save their market position (Petropoulos, 2017). Sharing economy is also considered by some as a way to achieve greater environmental sustainability (e.g. reduced pollution) and social mixing (e.g. sharing practices) (Rojanakit et al. 2022). On the other hands, sharing economy receive criticisms and concerns because of the potential detrimental effects on traditional businesses and increased inequalities. In fact, crowding out effects could hit offline market operators that are also subject to stricter regulations with respect to the platforms (for instance, traditional taxi drivers are subject to more stringent regulations with respect to Uber drivers). Furthermore, negative externalities might concern third parties that are not involved in the sharing economy transaction. As highlighted in Frenken and Schor (2017), for instance, neighbours of houses shared on collaborative platforms might experience nuisance and feelings of danger from strangers. What is more, the distribution of the generated value is uneven among both the participants and the society as a whole. A non-negligible issue is related to the regulation of the digital intermediaries that own a large volume of information about the market and their participants that are not available to other players. The greater power held by digital intermediaries both in terms of less stringent regulations and availability of data generate a problem in terms of empirical analysis of the impact of the sharing economy on local economies. In fact, citing from Codagnone and Martens (2016, p. 15), “available empirical evidence to date is very partial and inconclusive – in many cases it is simply anecdotal and often presented by stakeholders - (i.e., the platforms themselves) - in the current controversies”. Furthermore, different territorial contexts might be both characterized by a more or less pervasive sharing economy and differently impacted by it.

This work aims at taking a first step in the attempt of overcoming the limits related to the lack of an empirically-grounded debate on the topic. Frenken and Schor (2017) in their proposals for future and useful research mention the need for analytically conceptualize and empirical assess the potential impact of the sharing economy in terms of people and prosperity without having access to user data. To try to overcome the issue related to the unavailability of data exclusively owned by the platforms,

in this work we focus on the location of owners and consumers of the idle resources with the aim of proposing an overview of the spatial diffusion of the sharing economy as well as its intensity of development. In fact, even though the spatial diffusion of the sharing economy depends on the location of the three actors involved in idle resources exchanges (Capello and Lenzi, 2021a), digital platforms are particularly scant in the European context. Generally, those places able to attract their headquarters, mostly outside Europe, are those best positioned to enjoy the disproportionate rewards digital intermediaries gain from the sharing economy. For what concerns providers and end users, the diffusion of the sharing economy in the population is favoured by the wide accessibility of user-friendly apps easy to install in all mobile devices. In principle, therefore, the sharing economy can be pervasive in all locations, depending on the degree of modernisation and digital literacy of the local population. Providing an overview of the geography of the sharing economy in Europe is preliminary to an in-depth future analysis of the impact of this type of digital based economy on local economic systems and societies.

The next section presents the approach followed to map the sharing economy in European regions, by concentrating on the more traditional players (i.e. providers and users) involved in the idle resources transactions, whose location can be easily identifiable and their intensity of use of sharing platforms monitored.

### **3. Method**

The development potential of the sharing economy is in principle vast and extensive. However, not all the places are characterized by the same intensity of the phenomenon that can be manifest with different stages of development according to specific dimensions. Detecting and analyzing the intensity of the sharing economy is fundamental to investigate the impact of the phenomenon on local economic systems and labor market conditions.

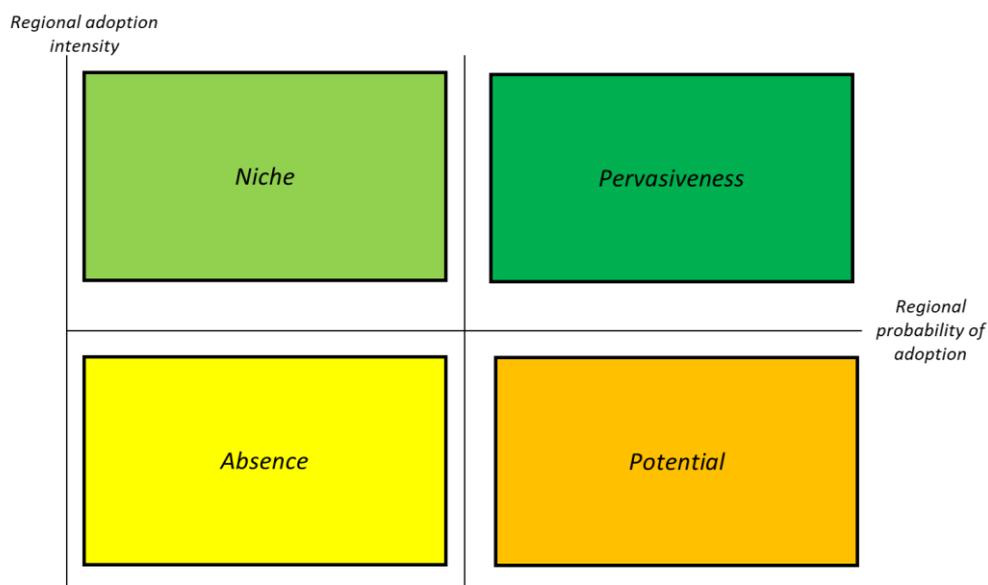
The identification of the stages of development of the sharing economy is based on two conceptual dimensions. The first one is the use of digital technologies in the local population as to account for the *probability* of the phenomenon to occur. Empirically, it is measured with the regional share of population using internet daily with respect to the country. The second dimension considered is the *diffusion* or *adoption intensity* of sharing economy practices in the local population. Empirically, this is measured as the share of population exchanging goods and services on-line with respect to the country.

The crossing of these two dimensions highlight four alternative situations, or stages of development of the sharing economy:

- the sharing economy is *absent*, when both indicators are below the national mean;

- the sharing economy is *potential*, when the share of population using frequently internet is above the national average but the web is not used intensively for sharing purposes, i.e. the share of people exchanging goods and services online is below the national average;
  - the sharing economy is a *niche*, when sharing practices are more intense than at the national level among internet users, but the share of population using frequently internet is below the national average;
  - the sharing economy is *pervasive* when both indicators are above the national average.
- The following figure graphically represents the four alternative stages of development.

**Figure 1.** Sharing Economy Development Stages



**Source:** Authors' representation

It is worth noticing that the variables used to identify the different stages of development represent not only favourable conditions for the sharing economy to take place but they might be as well conducive to other digital transformations or advancements not necessarily related with the sharing economy, still beneficial for local productivity.<sup>1</sup>

The reference year for the variables used to identify these four alternative situations is 2010. The choice of this reference year has been driven by the prospective objective of empirically investigating later the impact of the sharing economy on local socio-economic outcomes such as wage inequalities or increase in productivity. We expect that similarly to other technological

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<sup>1</sup> We thank an anonymous referee for suggesting this interpretation.

transformation, also the sharing economy needs time to generate real effects on economic systems and we therefore decided to select the oldest available year<sup>2</sup>. All data used for the computation of the indicators described above have been sourced from EUROSTAT and cover all NUTS2 regions of EU27 + UK. Importantly, each indicator has been standardized with respect to the national value to mitigate strong country effects in the intensity of use of digital technologies and the diffusion of digital infrastructure, extremely prominent in the European context.

Moreover, in order to interpret the socio-economic profile of the different groups of regions, several variables, listed and described in Table 1, have been considered and an ANOVA analysis has been implemented to highlight the key characteristics that can be associated with each stage of development of the sharing economy.

**Table 1.** Variables description

Variable	Variable Description and Source	Year	Source
<b><i>Sharing economy</i></b>			
Consumer to consumer online sales	Share of population exchanging goods and services online	2010	Eurostat
Internet use	Share of population using internet	2010	Eurostat
<b><i>Socio-economic context</i></b>			
Personal wealth	Gross Domestic Product per capita	2010	Eurostat
Human capital	Share of population (>15 years) with tertiary education	2010	Eurostat
Innovation	Number of trademarks per 1,000 inhabitants	2010	Eurostat
Urbanisation	Share of people living in metropolitan areas	2010	Eurostat
Median age	Median age of the population	2010	Eurostat
<b>Economic Dynamics</b>			

<sup>2</sup> We recognize that the use of 2010 data might represent a limitation of the present study, even though it is useful for future research purposes. However, interesting follow ups open up from this choice as a subsequent work could be carried out using more recent data and therefore investigating the evolution of the geography of the sharing economy in Europe over time.

Productivity growth (2008-2012)	Average annual compound growth rate of labour productivity (value added on total employment).	2008-2012	Eurostat
Productivity growth (2013-2017)	Average annual compound growth rate of labour productivity (value added on total employment).	2013-2017	Eurostat
Entrepreneurship	Regional Entrepreneurship and Development Index*	2010	REDI
<b><i>Labor-Force Composition</i></b>			
High-skills share	Share of employment in high-skills occupations (ISCO 1 and 2)	2010	Eurostat
Low-skills share	Share of employment in low-skills occupations (ISCO 8 and 9)	2010	Eurostat
Wage inequalities	Difference between the 90th percentile and the mean of the average wage (labour cost/number of employees)	2010	CompNet
Knowledge Intensive Services	Employment share in Knowledge Intensive Services	2010	Eurostat
<b><i>Internet Use</i></b>			
For social purposes	Share of individuals participating in social networks	2010	Eurostat
For banking purposes	Share of individuals using internet banking	2010	Eurostat
For political purposes	Share of individuals using internet for civic or political participation	2010	Eurostat

**Note:** All variables are standardized with respect to the country average.

\* see the report website:

[https://ec.europa.eu/regional\\_policy/sources/docgener/studies/pdf/regional\\_entrepreneurship\\_development\\_index.pdf](https://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/regional_entrepreneurship_development_index.pdf),  
last visited 2021/03/24

**Source:** Adapted from Capello, Lenzi and Panzera (2022)

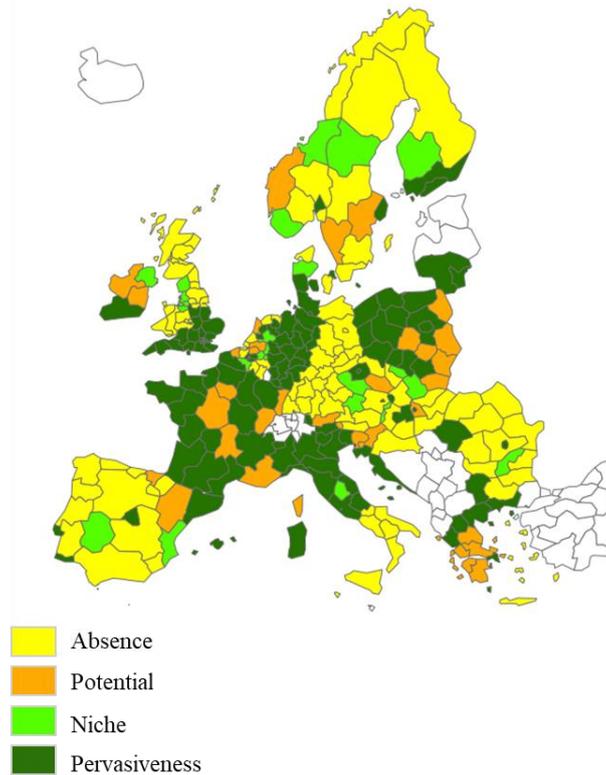
#### **4. Results and Discussion**

Figure 2 displays the geography of the sharing economy in European regions. Even if each country shows distinctive traits, some general patterns can be highlighted.

First, all capital regions present a very well-developed sharing economy, also in countries lagging behind in terms of digital infrastructure and digital literacy, as in the case of Italy, Romania and Bulgaria. Second, in almost all countries the sharing economy is absent in several regions. Third, the intermediate cases of potential and niche sharing economy are relatively less diffused than the two extreme situations of pervasive or absent sharing economy. Intermediate cases are generally more diffused in countries with a more developed digital infrastructure, such as in France with a relatively high number of regions with a potential sharing economy, or a greater population digital literacy such as Scandinavian and Northern countries with a relatively higher number of regions with a potential niche economy. Generally, however, the sharing economy either is widespread or is still absent.

Moreover, some countries present interesting patterns. For example, Southern countries (e.g., Spain and Italy) are characterised by the usual geography of more advanced regions in the North and less advanced regions in the South. Usual geographies characterise also Eastern countries, with the traditional divide between capital regions and the rest of the country, a trend very evident for Romania, Bulgaria, Hungary, Slovakia. Differently, Germany shows a somewhat unexpected pattern, with regions hosting either a pervasive sharing economy or an absent one. There are not German regions characterised by an incomplete development of the sharing economy. This pattern is closely linked to the East-West divide characterising several other socio-economic dimensions.

**Figure 2.** The geography of the sharing economy in Europe



**Source:** Adapted from Capello, Lenzi and Panzera (2022)

The results of the ANOVA exercise help defining the profile of the different groups of regions characterised by a different development stage of the sharing economy (Table 2).

The *pervasiveness stage* is prevalent in wealthier regions, with a more educated population, a higher innovation intensity and a greater urbanisation. In fact, as evident from Table 2, most of the socio-economic context conditions are significantly (i.e.,  $p\text{-value} = 0.000$ ) higher in regions with a pervasive sharing economy with respect to regions characterized by other stages of development. There are not instead sizeable differences in terms of population demographics. The median age of the population is not significantly different across the alternative stages of development. The regions characterised by a pervasive sharing economy benefitted from positive economy dynamics but not from a more developed entrepreneurial performance. This result is somewhat unexpected considering the higher share of skilled employment and knowledge intensive employment in this group of regions. There are can be two possible explanations for this unexpected result. First, within the context of the sharing economy, the actor endowed the most with entrepreneurial talent is likely to be the platform. Since the platforms are neither detected by our analysis nor are located in European regions, it is reasonable to think that pervasive sharing economy is not necessarily linked with entrepreneurial performance. Second, when the sharing economy phenomenon is pervasive, it might be the case that

a crowding out effect hitting the traditional offline market operators take place, therefore reducing or weakening the regional entrepreneurial practices.

Lastly, the use of internet in these regions is the most intense for all purposes (i.e. social networking, home banking, civic and political participation).

The *niche stage* presents some distinctive elements with respect to the pervasiveness one. Regions in this group present the lowest levels of personal wealth, education, innovativeness and, consistently, of skilled and knowledge-intensive employment. These regions present also the lowest level of urban population, indicating that they are primarily located in the most remote areas of the EU. Interestingly enough, they are characterised by more favourable economic dynamics (especially in the post-crisis period), greater entrepreneurship and an intensive use of internet for social networking. These two latter features are fully consistent with the idea of a sharing economy aimed at creating value from idle resources through peer-to-peer market transactions. Despite unfavourable socio-economic context and labour market composition, these regions present niches of sharing economy that could potentially be expanded and become dominant at the regional scale.

The *potential* stage characterises regions with a more favourable socio-economic context with respect to the niche stage in terms of personal wealth, education and innovation intensity. By looking at the results reported in Table 2 these regions score second (after the ones in which the sharing economy is pervasive) in all the variables accounting for the socio-economic context. These regions, however, have been strongly hit by the crisis period showing the lowest productivity growth in the period 2008-2012 (despite a quick rebound in the following period) and show sizeably lower level of internet use for social networking and entrepreneurial intensity than the other two groups of regions.

Finally, the *absent* stage is prevalent in regions with disadvantageous socio-economic context (these regions present low values for personal wealth, human capital, innovation and urbanisation), an adverse labour force composition, skewed towards unskilled employment, the worst economic performance, especially in the post-crisis period, and the most limited use of internet for any purpose. The entrepreneurship performance is scant as well as the presence of high skilled workers. These conditions cast doubts about the future development of the sharing economy in these regions.

Finally, it is worth spending a few words on the relationship between the wage inequality variable and the development stages of the sharing economy. As shown in Table2, there is a sharp divide between the pervasive stage, characterised by the highest wage inequalities, and the other situations, suggesting that the full-scale development of the sharing economy may bring the risk of amplifying existing inequalities in the labour market, a result consistent with the most pessimistic warning in the literature and in the press (Autor, 2013, 2015; Brynjolfsson and McAfee, 2014; Frey and Osborne, 2017; Rullani and Rullani, 2018). These potentially detrimental effects on wage

inequalities might be mainly linked with shadow effects generated on traditional offline businesses and their employees. The substitution of traditional activities with new ways of exchanging goods and services enabled by online agents could cause displacement and reinstatement effects when pervasive in an area. These assumptions deserve to be empirically tested to be either confirmed or proved incorrect.

**Table 2.** The sharing economy and its enabling regional socio-economic context conditions. Results from ANOVA

<b>Variable</b>	<b>Absence</b>	<b>Potential</b>	<b>Niche</b>	<b>Pervasiveness</b>	<b>P-value</b>
<b><i>Sharing economy</i></b>					
Consumer to consumer online sales	0.84	0.73	1.16	1.17	0.000
Share of internet use	0.93	1.03	0.96	1.06	0.000
<b><i>Socio-economic context</i></b>					
Personal wealth	0.85	0.95	0.83	1.05	0.000
Human capital	0.95	1.04	0.91	1.06	0.000
Innovation	0.73	0.94	0.66	1.13	0.000
Urbanisation	0.69	0.80	0.60	0.99	0.002
Median age	1.01	1.02	1.02	1.01	0.409
<b><i>Economic Dynamics</i></b>					
Productivity growth (2008-2012)	0.78	0.53	0.88	1.09	0.114
Productivity growth (2013-2017)	0.02	1.25	1.41	1.34	0.053
Entrepreneurship	0.86	0.90	1.03	0.86	0.214
<b><i>Labor-Force Composition</i></b>					
High-skills share	0.89	0.91	0.81	0.98	0.003
Low-skills share	1.03	0.97	0.99	0.96	0.366
Wage inequalities	0.89	0.89	0.79	1.01	0.000
Knowledge Intensive Services	0.95	0.93	0.94	1.03	0.000
<b><i>Internet use</i></b>					
Social purposes	0.84	0.85	1.16	1.18	0.000
Banking purposes	0.88	1.01	0.98	1.01	0.000

Political purposes	0.91	0.91	0.97	1.06	0.000
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**Note:** All variables are standardized with respect to the country average.

**Source:** Authors' elaboration (2022)

## Conclusions

This paper has proposed an empirical measurement of the widely debated phenomenon of the sharing economy and has described its geography and stages of development in European regions.

Some interesting results emerged from this analysis highlighting uneven patterns across countries. While in several cases, there is an association between pervasiveness of the sharing economy and more favourable socio-economic conditions, there are also exceptions departing from this general trend. Especially in regions characterised by a niche sharing economy, the key ingredients for future expansion of the sharing economy look the presence of a diffused entrepreneurial spirit, a high propensity to use the web for social networking and a strong economic dynamism.

The identification of different stages of the development of the sharing economy is important in order to formulate reasonable gentle guesses about the possible socio-economic impacts that it may generate. While there is sufficient converge on the positive economic effects of its development, far more controversial is its impact on the labour market. This controversy is also legitimated by our findings on the widening of wage inequalities accompanying the intensity of sharing economy. On the one hand, its development may require the creation of high-skill, élite jobs by intermediary platforms to fill managerial, executive or engineering tasks in their headquarters and research facilities. This effect, however, is expected to be very limited in the European context and at best, highly concentrated in few hotspots hosting such activities. On the other hand, a displacement effect can take place, harming low-skill workers. In fact, the provision of customer-to-customer services can enhance competition with traditional offline businesses (e.g. BlaBlaCar versus traditional transport services), and can erode their market share. The contraction of business opportunities can lead to a displacement of workers employed in those activities and, indirectly, to a reduction of their wage conditions (Rullani and Rullani, 2018; Frenken and Schor, 2017).

These issues require further investing and timely analysis. We hope to extend our research efforts in this direction.

A further interesting future step is the extension of this analysis to more recent years with the goal of comparing differences and similarities and evaluating the evolution over time of the geography of the sharing economy in Europe.

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