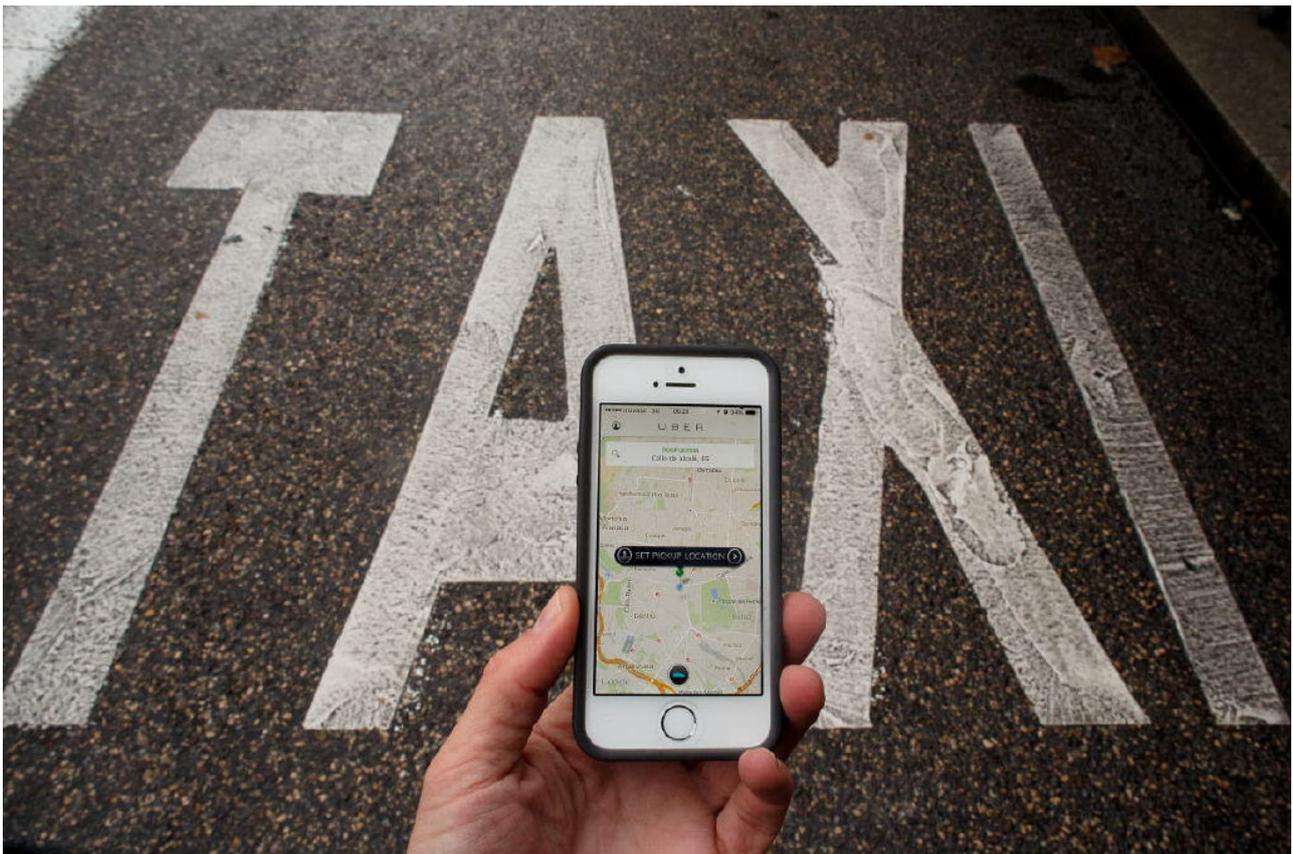


Services like Uber are challenging traditional sectors such as the taxi industry. However, they may charge more than traditional taxis at time of high-demand. To counter this phenomenon, data analysis could bring full transparency in relation to taxi pricing by delivering a head-to-head comparison of all available taxis types. In this opinion piece, Anastasios Noulas, lecturer at the Data Science Institute at Lancaster University, UK, and OpenStreetCab co-founder, shares his experience of how data-driven solutions can increase transparency in tech-disrupted industries and ultimately provide better value for policy makers from publicly available data.

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From Uber to OpenStreetCab: how data shifts the power back to users



Greater transparency and value for money needed in tech-disrupted industries

Call it as you like. A car sharing, car hiring or simply a taxi service. There is no difference on the ground. Uber's main competitors are taxi and minicab companies in hundreds of cities worldwide.

Over the past couple of years, the California-based company has grown to serve [a billion journeys in 2015](#), with tens of thousands of vehicles crawling every moment the globe's biggest cities. Every kilometre driven in an Uber taxi adds an extra little piece to an ever growing market share in an industry that is [worth hundreds of billions](#). But is there a way for taxi customers to get the fairest deal as prices are no longer static? And can policy makers get greater value from publicly available data to inform their decisions?

Technology answer to disruption

There are almost a thousand minicab operators in a city like London. Meanwhile, the galloping urbanisation process is expected to lead to more than 60% of the earth's population [living in cities](#) by 2030. In addition, global mobility looks unstoppable. It therefore does not come as a surprise that disruptions in urban transport would also spark controversy.

As new technologies emerge to transform traditionally operating industries there are changes in norms. The most controversial in the Uber case has been the introduction of a volatile pricing landscape for taxi journeys: Uber's "surge pricing" [https://en.wikipedia.org/wiki/Uber_\(company\)#Surge_pricing](https://en.wikipedia.org/wiki/Uber_(company)#Surge_pricing) experiment. It varies journey prices in real time in accordance to the service's [perceived balance](#) between passenger demand and driver supply. Passengers and drivers alike now find themselves in an entirely new marketplace.

In this marketplace, the cost of a taxi journey is not as predictable as previously. Worse, the control over price is in Uber's hands. New technologies like those developed by Uber are able to disrupt its market. However, alternative technologies can also provide innovative solutions to circumvent the challenges associated with this disrupted market.

Power back to consumers

Knowledge is power, Sir Francis Bacon once said. In the 21st century, the new proxy to power is data. No better examples are state-operated large scale surveillance programmes like the one orchestrated by the National Security Agency in the USA. Other examples range from the organised corruption, recently revealed by the revelation of the Panama Papers, to the establishment of monopolies by Google for online search, Amazon for online retail and Facebook for online social interactions.

To counter these emerging trends, the disclosure of information based on the analysis of data has been the simplest, yet most effective, mean of not maintaining a fair society in economic and political terms, during periods of accelerated change.

Guided by this principle, we have built a technology solution to introduce transparency in taxi fares and help give power back to customers. This is how we have developed [OpenStreetCab](#). This app is the result of a collaboration between three European Universities--namely Cambridge and Lancaster, in the UK, and Namur, in Belgium. It aims to equip passengers with knowledge of the different price available from different taxi services, in real time.

Launched in [New York City, USA, in March 2015](#) and more recently in London, UK, OpenStreetCab, has been enthusiastically received by thousands of mobile users, It has also has enjoyed the endorsement of taxi drivers and [technology gurus](#) alike.

Data-driven knowledge

The concept of OpenStreetCab is simple. Users submit a query with information on their intended taxi pick up and drop off locations. The app provides almost instantly estimates of the costs incurred by major providers for their journey. It is powered by the lawful release of [open datasets](#) that describe taxi mobility. Thus, OpenStreetCab's mission is to understand the new complexities emerging in urban transport. It has been designed to empower urban travellers with the knowledge required for making informed choices, as they navigate the city.

The millions of taxi professionals and minicab companies worldwide can also expect benefit from OpenStreetCab. It has the potential to provide the traditional taxi ecosystem with the tools to face up to the competition by Uber by giving them transport intelligence. It thus enables them to remain competitive in the face of the Uber behemoth. As Uber is no longer has the near monopoly over data intelligence for transport, much like Google has done for online search over the past two decades.

A first step in this direction, starts with the introduction of minicab operators in the app's search results. We also aim to keep the community of small transport players strong by providing intelligence solutions supporting their operations. We are planning to offer services to help them optimally deploy their drivers throughout the city, to help with quicker pick-ups for example. We also plan to offer better methods to facilitate communication between local cab companies and their customer base.

Our vision is that OpenStreetCab's services will only remain relevant in the long term, if there is a diverse global market of intelligent taxi providers.

Customer value from data

OpenStreetCab's work can also be placed in a broader context. Services whose concept relies on open data have been blossoming across multiple economic sectors. In the sphere of the [sharing economy](#), the presence of [Inside Airbnb](#) has shed a new light regarding the reality of how those involved in providing hospitality via the service operate. The result is an eye opener. One of the myth this data helps debunk is that AirBnB is for hosts--which only occasionally rent the homes in which they live--as often rentals are run like a business.

When it comes to public transport, there has been a plethora of cases where open data sets have provided unprecedented insights into how city dwellers move. More importantly, these datasets also open the door to informing how transport services can be optimised.

Despite these notable efforts, citizens, policy makers and governments need to keep advocating more data openness. They also need to continue endorsing the existing efforts seeking to harvest value from data. This will help towards our transition towards a world where technology is dominant while helping services to remain competitive and fair.

Anastasios Noulas

Anastasios is lecturer at the Data Science Institute at Lancaster University, UK, and OpenStreetCab co-founder.

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