

Do the externalities of web platform companies outweigh their benefits?

The rapid advance of technology in past decades has remarkably changed all aspects of our lives, whether we look at its effects on our society, economy, culture, politics or others. The worldwide influence of this technological advancement has increased at such an exponential rate, we could only observe how each of these aspects gets hit by a brimming wave of progress. The transition from the "read-only" Web 1.0 to user-driven Web 2.0 has brought a massive switch from the simple consumption-based Internet to an explosion of mass participation, mass contribution and collaboration, forever changing the way we use web technologies. Telephones went from being an item used for "casual" pursuits of general public such as calling and messaging to being a multi-purpose device that we use to drive businesses, stay up to date with actualities anywhere on the world, make a political impact or even create new kinds of employment. Social media networks became main platforms of business, advertising and marketing world. Many other emerging technologies had an impact on the road to the current state of the web, some more important than others, but the most significant and influential one still remains the evolution of web platforms. Web platform is a web-based software system that can be programmed and customised by developers directly on the web, independently from their computer's operating system, thus giving developers the freedom to adapt this software to countless needs and niches that could not have been possibly contemplated before.¹ However, we could describe web platform much more easily as any technology, software or service available on the web, that enables users to input, receive or exchange some kind of information or data, in order to execute certain action beneficial to the user. This ability goes in line with one of the goals of Web 2.0 to use the web as a participatory development platform. Many industries have used the opportunity to use these web platforms, not only to improve their productivity and innovation, but also to create entirely new types of digital-based companies with profoundly different purposes, sophistication and abilities than previous business models. Thanks to a rich profusion of new online collaboration and development tools, companies began to design, develop and distribute products and services that transformed not only traditional ways of how business was done, but also other areas such as transport, culture, entertainment, lifestyle or even politics. This gave rise to many web platform companies experiencing a tremendous growth due to advantages of these new technologies and ability to include customers themselves in the development process. Even already existing business entities have started to implement these technologies, in order to catch up with new-found competition, including customers in the innovation process, sharing resources that would be previously closely guarded and harnessing the power of mass collaboration, creating a new increasingly collaborative enterprise model we now call "Enterprise 2.0".² Web platform companies have, however, brought many unanticipated negative externalities accompanying the sheer amount of benefits that they offer. These negative externalities, defined in economics as a negative cost, that indirectly affects a third-party that did not choose to incur that cost³, have affected many parts of our lives. We have seen fake news and terrorist propaganda spreading around the Internet, mental health issues stemming up from excessive use of social media and even environment starting to get destroyed as a result of web platform based mobile-apps success. In this essay, I will use Instagram, the biggest photo and video-sharing social networking service, as well as Uber, the fastest growing digital transportation network company, as examples to consider theoretical and real externalities of such web platforms and to discuss whether they bring more value than harm to our lives or their negative externalities simply outweigh all of their benefits.

The first platform that I will discuss is Instagram, currently, the fastest growing social media platform taking our digital world by storm. Instagram is allowing over 500 million daily active users to stay connected to their friends and followers and share their life, experiences or creative products with the world. There are already over 50 billion shared photos on Instagram, with over 100 million photos on average uploaded every day and these receiving around 4.2 billion likes daily.⁴ Just as importantly, Instagram has also the most engaged user base, having demonstrated levels of engagement 15 times bigger than Facebook and 20 times bigger than Twitter.⁵ These levels of participation have

¹ Marc Andreessen (2007). *The three kinds of platforms you meet on the Internet* [online]
<https://pmarchive.com/three_kinds_of_platforms_you_meet_on_the_internet.html>
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² Don Tapscott, Anthony D. Williams (2007). *Wikinomics: How Mass Collaboration Changes Everything* -> just go check in the library

³ Tejvan Pettinger (2017). *Negative Externalities* [online]
<www.economicshelp.org/micro-economic-essays/marketfailure/negative-externality/>
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⁴ Salmam Aslam (2018). *Instagram by the Numbers: Stats, Demographics & Fun Facts* [online]
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⁵ Chris Leone (2018). *Which Social Media Sites Get The Most Engagement?* [online]
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effectively made Instagram the best current platform for growing business and brought enormous economic growth and value to businesses that use this web platform. What has once started as an image-sharing service has become a digital hub for social marketing and advertising, finding promoters and building a natural relationship between a brand and its followers.

From a business perspective Instagram is the paradise for commercial growth. Instagram Insights offer complete and in-depth statistics of promotion results and post engagements, allowing companies to study preferences of their followers and understand how they react to their products or services. Instagram Stories are another way of telling your business's story, increasing chances of being discovered by an audience of over 400 million story spectators daily.⁶ There is also a possibility to stream live on the Instagram allowing businesses to interact with their audience directly and in real-time. All these functional possibilities along with Instagram's ad platform, that offers some of the most advanced targeting options available on the market, made Instagram almost indispensable extension of any company, making its economic influence the biggest benefit of the platform. Furthermore, Instagram didn't inspire increased economic growth only for companies, but also for countries of this world. As a result of its strong visual nature and original purpose of sharing users' lifestyle, it has emerged as the greatest hub for travellers and thus travel industries as well. Since the very launch of this platform, it has been flooded with thousands of photos from beautiful destinations, never seen by its users before in such fashion and scale and this motivated one of the fastest boosts of tourism in history. For example, between 2009 and 2014, the number of visitors to Trolltunga, a famous viewpoint in Norway, has increased from 500 to astonishing 40,000 visitors in one year.⁷ Chris Burkard, an esteemed American landscape photographer, summed up this phenomenon saying: "Now you're less than 10 clicks away from seeing an image on Instagram to purchasing a ticket to go there."⁸ This rise in tourism fuelled by travel inspiration coming from Instagram has increased the travel industry revenues of some countries by over 14% percent. The influence of Instagram on travel industry has also led to another related benefit and that was creation of jobs, more specifically new kind of jobs, a profession that we nowadays call an influencer. In the past, companies have traditionally used celebrities to promote their products or services, but Instagram has changed the game completely and introduced a new form of 2-sided marketing network, where travellers with reasonably big follower base became very attractive for brands as prospective ambassadors for their products. Influencers first started to earn money by promoting businesses and services mainly in the hospitality area, but later other sectors realised the potential of these collaborations and now this strategy is being used by everybody. There is already 86% of marketers reporting they have used influencer campaigns in the past year and as nearly 50% of them prepare to ramp up their influencer budgets over the next year, influencer marketing could become a \$2 billion industry by 2019.⁹ The last benefit of Instagram to mention is its creative and social value. Instagram has always been a community platform not only for friends and relatives but also for all kinds of artists, photographers and other creative minds. There's no doubt that the process of capturing the photo, editing and even the thought process behind curation of the feed strongly challenges the creative capabilities of every user. Even though marketing strategies might seem to be the most discussed topic around the usability of Instagram, it will always remain in its heart a hub of inspiration, originality and creativity.

On the other side, the very benefits of Instagram as a sharing platform have led to some of the most serious problems of present society, such as mental health issues, productivity decrease and fear about protection of intellectual property. There are studies claiming that Instagram has some seriously detrimental effects on teenager's and young people's mental health and well-being. For example, a recent survey called #StatusOfMind, taken on almost 1,500 teens and young adults from the UK, tested how each of the social media platforms may be inciting increased anxiety, depression, sleep deprivation or a phenomenon called FOMO (Fear Of Missing Out). Instagram ranked as the worst in these aspects while, however, showing positive results in aspects of self-expression. "Seeing friends constantly on holiday or enjoying nights out can make young people feel like they are missing out while others enjoy life" the #StatusOfMind report states.¹⁰ Many psychologists claim that although Instagram may offer a fun way of staying in contact with relatives, it also presents unrealistic perceptions about the life of other people, leading to depression about the state of one's own life. Young people caring more about what other people on platform think of them, rather than caring about what they think of themselves, end up with ill-minded mental processes such as measuring their self-worth according to the number of likes on their posts. What is even worse about this is that tech industries exploit these negative effects to design addictive techniques that keep these users hooked to the screen for even

⁶ Instagram internal data (2018) [online]
<www.business.instagram.com>
[Accessed 17 November 2018]

⁷ Carrie Miller (2018). *How Instagram is changing travel* [online]
<www.nationalgeographic.com/travel/travel-interests/arts-and-culture/how-instagram-is-changing-travel>
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⁸ Chris Burkard (2017) as quoted in *How Instagram is changing travel* [online]

⁹ MediaKix Team (2017). *Instagram Influencer Market Size* [online]
<www.mediakix.com/2017/03/instagram-influencer-marketing-industry-size-how-big/#gs.7p_IY2c>
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¹⁰ Royal Society for Public Health (2017). *Status of Mind: Social media and young people's mental health* [online]
<www.rsph.org.uk/uploads/assets/uploaded/62be270a-a55f-4719-ad668c2ec7a74c2a.pdf>
[Accessed 16 November 2018]

longer, in order to maximise engagement rates in this highly-competitive attention economy. This directly leads to another negative effect on society and that is the amount of time that users spend on Instagram. According to multiple reports, an average user spends at least one full hour a day solely on Instagram¹¹. Considering the fact, that we spend a considerable amount of time on other social networks, this is an alarming amount of wasted time and it has been proven to significantly decrease productivity levels, form addictions and reduce the ability to focus on other activities. The last externality, hugely discussed and criticised in past months, is the topic of data privacy and intellectual property. In 2012, shortly after acquisition by Facebook, the platform has shocked the user base with a dramatic policy change that gave “perpetual right to sell users' photographs without payment or notification”¹². Another section of terms has also granted the right to get paid for providing users photos to other parties, without compensation to authors of those photos. After a quick outburst of disagreement and protests from the public, these policies were eventually removed from terms of use. Despite the dismissal of these ridiculous conditions, the user base still has reasons to worry about how much control they really have over their own content and personal data that they share through this platform.

We can see that a web platform of such scale brings a lot of pros and cons on the table to discuss and it may be very difficult to decide which of them outweighs the other. I will thus consider another very famous and heavily discussed web platform before coming to conclusion about this topic. This platform is Uber, principally a ride-sharing and taxi service that has developed into one of the fastest growing startups worldwide. Having launched in 2009, Uber has taken just 6 years to surpass the valuation of 100-year-old companies such as Ford or General Motors¹³, showing the great difference in the competitiveness of traditional and web platform enterprises. The reason for this is not only the originality of the idea that has inspired this business but also the fact that the rapid growth and usage of this app has created a number of network effects, that affect the value of a product significantly. The more people use the service, the greater is the demand, thus it becomes more valuable. These network effects, unfortunately, always create both positive and negative externalities. The greatest benefit of Uber, same as in the case of Instagram, is the general economic growth. Uber has brought a demand for new employees on the market, creating a new category of jobs, called independent workers. Uber drivers can enjoy very flexible working conditions, allowing them to get significantly better work and life balance. According to studies, “71% of Uber drivers have family at home and prefer the flexibility that Uber allows them.”¹⁴ Also recently the government has forced Uber to make their workers full-time employees, allowing them to get previously unavailable worker benefits such as gas reimbursement or health insurance. From the point of view of riders, another consequential benefit of Uber is its convenience. By virtue of web platform capabilities of Uber app, it is much easier and faster to order a ride than getting a normal taxi. Additional features such as being able to track the location of arriving Uber driver and checking out his overall feedback from previous customers contribute to consumers feeling well-informed and hence safer. Another extremely important advantage of Uber is its relatively low cost. Their pricing model is dynamic, modifying the price in real-time in order to level demand and supply. This means that compared to traditional taxi fares, Uber turns out to be notably cheaper than taxis. According to Ride Guru, in most of the cities in which Uber operates a ride with their drivers turns out at least 50% cheaper than taking a traditional cab. The only city where this is not applicable happens to be New York, the capital of taxi industry, that reports biggest issues with Uber being detrimental to their business.

This brings about the first negative externality of Uber and that is their impact on the taxi industry. Because of fixed rates and frequently limited availability of taxis, the entry of Uber on the market has greatly reduced the demand for them. In New York, the number of taxi trips fell by 8% between 2012 and 2014 and in San Francisco there was a staggering decline of 65% of taxi rides, in the two years after Uber's launch.¹⁵ Yellow cab drivers, who must follow strict regulations and buy very expensive licences to operate are complaining about the unfair competition with unregulated Uber, who can settle their own prices and hire unlicensed drives as well as about the decline in value of their licenses as a result of their entry on the market. Another serious externality affecting society is that the necessity of using mobile application by drivers has caused an increased number of accidents & deaths on the road. As Uber drivers have to constantly check their smartphones to accept orders, call customers at pickup and follow directions, they are distracted from driving, making roads less safe for third parties. There is also an effect on the

¹¹ Rani Molla, Kurt Wagner (2018). *People spend almost as much time on Instagram as they do on Facebook* [online]
<<https://www.recode.net/2018/6/25/17501224/instagram-facebook-snapchat-time-spent-growth-data>>
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¹² Declan McCullagh (2017). *Instagram says it now has the right to sell your photos* [online]
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¹³ Georgios Petropoulos (2016). *Uber and the economic impact of sharing economy platforms* [online]
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¹⁴ Mansoor Iqbal (2018). *Uber Revenue and Usage Statistics 2018* [online]
<<http://www.businessofapps.com/data/uber-statistics>>
[Accessed 22 November 2018]

¹⁵ Scott Wallsten (2015). *The Competitive Effects of the Sharing Economy: How is Uber Changing Taxis?* [online]
<https://www.ftc.gov/system/files/documents/public_comments/2015/06/01912-96334.pdf>
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environment as a result of Ubers' activity on roads. With more taxi drivers on the road, but the same demand, there is an increased emission of carbon dioxide contributing to the air pollution problem.¹⁶ On the other side, Uber may argue that they use much more fuel efficient vehicles than traditional taxis and as a result of their availability in urban areas, fewer people may decide to own a car. The last negative externality that remains to be mentioned is the surge pricing, which again strongly affects the taxi industry. With its high demand, Uber has the capability of setting its own pricing which brings into the debate Anti-Trust Laws and possible accusations of monopolising the taxi industry. Other companies such as Lyft are entering the market, trying to follow the success of Uber, but unable to compete with their established audience, at the same time over-saturating the market and causing more negative externalities.

Many will argue that these externalities of web platforms like Uber or Instagram are causing more problems in current society than possible benefits and should be heavily regulated if not completely eliminated from the market. However, there is another point of view on this topic. It is not only about weighing the positives and negatives of web platforms, but also about evaluating their traditional competitors that strongly push for their regulations. The taxi industry is eager to blame Uber for their decline, but isn't it really a fault of the taxi industry itself? Reasons, why the average customer moves to Uber, is the inconvenience of fixed fares of traditional cabs and their limited availability and that is not the fault of Uber. As a report from Fairleigh Dickinson University says: "If taxis are unable to respond to the challenge of Uber, then they will gradually be driven out of the market and Uber will become the dominant player."¹⁷ From the consumer's point of view the verdict is already very clear. The efficiency, price and safety factors of Uber will always outweigh its occasional surge prices, worries about pollution and road congestion.¹⁸ On the other side, the presence of Uber could inspire the taxi industry to change and innovate, adopting new technologies in order to improve their services and survive. If this happens, we can easily see this competitive pressure lead to efficiency and more benefits for consumers.¹⁹ As for Instagram, I think the same principle applies. Spectacular capabilities brought about by this platform are hard to compare or even weight against its negative externalities. There is no way to make a definitive conclusion whether these web platforms are completely good or bad for us and the only option is to consider both sides separately, trying to find ways how to resolve issues that arise, as well as trying to fully harness benefits that this new technology offers us. However, despite many negative externalities that may accompany functioning of these new web platform based companies, they are in my opinion, strongly outweighed by benefits of these technologies, considering the fact that their drawbacks can almost always be resolved by more development and innovation. Indeed, every new invention brings about certain inevitable downsides, but they surely cannot erase the fact that the way our world is evolving around technology is making our lives much more connected, execution of our everyday tasks more convenient and our society more advanced.

¹⁶ Brent, Cherny, Hersh & Kolavo (2015). *Positive and Negative Externalities of Uber* [online]
<<https://www.youtube.com/watch?v=rdFx7AD6BQg>>
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¹⁷ Fairleigh Dickinson University, *Intro to microeconomics* [online]
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