# Fixing the data economy, and economic inequality.

*High economic inequality might drive India to embrace fairer surveillance capitalist personal data economies.*



On the contrary, it might result in higher quality (lowering processing costs) data being shared by individuals in many application scenarios and lead to economically-efficient HCDEs, and innovation in technology.

## By Ranjan Pal, Bodhibrata Nag, Jon Crowcroft, Mingyan Liu, Pradipta Ghosh and Swades De

We're in a digital data economy where an unprecedented amount of analysable information on humans, (Internet-of-) things, and nature opens up vast opportunities (more than ever before) for accelerated insights, innovation and economic growth. According to the UN Financial Trade Quarterly (FTQ) report of 2019, the five largest data firms in the world—Apple, Amazon, Facebook, Google and Microsoft—are actors in the digital data economy with a combined market value of nearly $4 trillion (as of 2019, and growing) that represents approximately 20% of market capitalisation in the US.

However, the people—whose raw data is driving the Fourth Industrial Revolution—play a rather passive role in the modern digital economy as they are often shamelessly, and unfairly, left out of the capitalist value chain that transforms their raw data into huge monetary benefits using powerful artificial intelligence (AI) tools. This non-transparent data economy brings an added disadvantage to common people in the form of privacy risks.

Most visibly, the Cambridge Analytica scandal and its influence on the 2016 US (and 2014 Indian) elections demonstrated that individuals are increasingly at privacy risk to become manipulated, against their preferences, through big data aggregating and analysing firms in the unfair surveillance capitalism age (a term coined by Shoshana Zuboff).

Economic inequality in certain digitally-booming GDP-rich nations is blatant (for example India, a rapidly-growing economy that is a top-five GDP nation globally), where millionaires control a significant portion (54%) of the nation's GDP, leaving the average individual's income paltry (approximately $12 per month in India). The monetary power of AI and data science-driven personal data commerce (PDC) can be leveraged in a host of initiatives with the aim of a more 'equal' distribution of wealth along with increasing GDP in nations exhibiting high economic inequality.

In addition, several (information) economists and technologists, over the decades and all over the globe—whether they represent economies with high inequality or otherwise—have argued in favour of an alternative human-centric data economy (HCDE) in which people be paid/compensated whenever their data will be used for revenue-generating products and services.

There is no denying the fact that, in principle, personal data—without which AI and machine learning-driven business models have zero value—should be paid for by collectors/aggregators to their owners; it's a viewpoint shared by industry leaders such as Bill Gates, Mark Zuckerberg and Elon Musk. This will help the personal data collecting capitalists give back, in all fairness, a significant amount of monetised digital wealth to its due owners, ensuring a fairer surveillance capitalist (or to a degree socialist) society, compared to the privacy and monetary unfair surveillance capitalist society currently existing today.

Empirical research in the western world has established that popular personal data (age, sex, browsing activity, geo-location, etc) of the average (mobile-savvy) individual is worth at least $1,000 annually. Such an amount, if economy calibrated and PPP-converted as a cash payment, can significantly reduce the GDP-induced macroeconomic inequality in any economy—its effect most likely to be felt on economies with high inequality; for example, for the smartphone-penetrating, GDP-rich, but highly unequal Indian economy, personal data monetisation is likely to reduce the average economic inequality by at least one-fourth.

Such an economy comes in with the following multiple additional 'perks' for the privacy-conscious personal data owning individual. First, monetising personal data will put economic pressure on online services with respect to them accruing data collection and processing costs, and subsequently propel them to apply data minimisation principles (to acquire minimum data), in accordance with recommended practices laid down in regulations such as the GDPR in the EU and the privacy Act in India.

This will help mitigate privacy risks. Second, HCDEs would usher in the concept of property rights (currently non-existent) over personal data, and confer these rights to data-owning individuals. This would hand over significant control regarding the ownership of personal data to its owner, who could then sell this public good generating data, license it for profit, use it as security to raise capital (as with intellectual property rights), and contribute to privacy-enhancing data minimisation.

Finally, the digital online services market is not necessarily a zero-sum game—paying owners for their data does not have to harm the profits of online services. On the contrary, it might result in higher quality (lowering processing costs) data being shared by individuals in many application scenarios and lead to economically-efficient HCDEs, and innovation in technology.

However, oblivious of the above viewpoint, one crucial facet still remains to be considered, and highly inequitable economies like India can garner thoughts about the successful existence of HCDEs undertaking PDC: Will the potential pitfalls of an HCDE (for example privacy risks) be potent enough for people in India to opt-out of doing PDC in HCDEs?

The broader social impact of such economies on three fronts: (1) a society preferring HCDEs will likely enable high-quality personal data to be collected by online (social) applications in a trustworthy fashion that subsequently will catalyse a much-improved AI-driven multi-stakeholder targeted advertising business, (2) the GDP-centric macroeconomic inequality in an economy might considerably reduce due to online (social) application users earning from their personal data, and (3) much to the like of these application businesses, users will invest in increased time and meaningful attention to the former that will act as upward spiral feedbacks on improved personal data collection.

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