

TAX JUSTICE AND FREE DATA: A NEW ZEALAND PERSPECTIVE

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Abstract

This article examines the role of data collection and the resulting growth in global wealth inequality through a New Zealand lens. The third and fourth industrial revolutions have enabled an increased concentration of wealth through the exploitation of large databases of information. Most of the corporations (and their shareholders) benefiting from this shift in wealth are based in the United States. The big information technology enterprises, such as Alphabet (Google) and Meta (Facebook), have enjoyed an immense accumulation of wealth by exploiting their unique market power to collect and commercialise data. This trend may grow if the predictions of a fourth industrial revolution come to fruition. New Zealanders contribute toward the success of these enterprises as willing users of their services and contributors to their databases. This article proposes that tax could be used as a tool to redistribute some of this shift in wealth back to New Zealand by using the volume of data transferred from New Zealand as a tax base, thereby focussing taxation on the source of the wealth transfer.

I INTRODUCTION

The theme of this issue is ‘Tax Justice: Perspectives from Aotearoa New Zealand’. This article considers tax justice with respect to the data collection that forms the basis for much of the third and fourth industrial revolutions and how this might impact upon New Zealand’s tax justice in the world.¹ The article is based on a premise that while conceptions of tax justice will vary, taxing economic rents is relatively low hanging fruit. When wealth is created beyond normal returns, taxing those excess gains is less likely to be contentious. Many commentators argue that large databases of user/consumer information result in economic rents due to the market power created by the scale of data. When data is collected for free and on a large scale, it is readily exploitable for commercial gain using algorithms to convert raw data into useful information. This market power is creating large amounts of wealth for some enterprises. This article proposes that New Zealand should consider taxing the collection of data as an alternative, or in addition to, the traditional tax bases of revenue and profit.

First, in part II, this article considers tax justice and economic rents, concluding that taxing economic rents is unlikely to breach generally recognised conceptions of fairness.

In proposing to tax data collection, part III argues that economic rents are being derived from data collection and typically in favour of investors in the world’s largest information technology corporations. In this part, the activities of the third and fourth industrial

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¹ On the third and fourth industrial revolutions, see Frances Raday, *Economic Woman: Gendering Inequality in the Age of Capital* (Taylor & Francis, 2019) 109-10.

revolutions are discussed before examining the largest of these corporations, how they collect and use data and how data collection contributes to the wealth of these enterprises. This part also examines New Zealand’s contribution to the wealth of global information technology enterprises by looking at the statistics on New Zealanders’ internet usage.

Part IV briefly considers the most prominent tax tools for taxing multinational digital businesses in the jurisdiction of the user including the digital services tax, the diverted profits tax and the OECD proposals for multilateral solutions. In this part, a tax on data collection is suggested. This involves a tax on the free ‘bits and bytes’ being transferred from New Zealand-based users to the multinational information technology enterprises. This suggestion means using volume of data as a tax base by attributing a monetary amount, for taxing purposes, to data transferred by New Zealand users to international digital services providers.

II TAX JUSTICE AND ECONOMIC RENTS

A Tax Justice

‘Tax justice’ means fairness in tax matters. Throughout many centuries, conceptions of tax fairness have been proposed, discussed, and debated.² However, we get to the 21st century and still no conclusion has been reached on exactly what fair tax allocation looks like. In this 2023 election year, how tax should be allocated among the citizens of New Zealand has been a highly contested issue.³ The essence of the debate is whether, or not, the burden of taxation should fall more heavily upon those who have accumulated greater amounts of wealth. In a society with growing inequality of wealth, some argue a fairer tax system is one that imposes a heavier tax burden on those who are more able to pay. However, this view is often countered by those who argue that placing a heavier burden on the wealthy will discourage productivity or encourage capital flight.

This article does not engage in debates about fairness. However, the arguments in this article are founded on a premise that taxing economic rents is uncontroversial when it comes to fairness. By economic rent, what is understood in this context is the return on investment that exceeds the base amount that is demanded by the market or that which is economically necessary. It is excess return – perhaps even windfall gains. If someone can earn economic rents from the economy, taxing those excess gains to return to that economy seems unlikely

² Adam Smith proposed a principle of ‘equality’ as an objective for taxation in Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (W Strahan and T Cadell, London, 1779) bk V. Since then, many commentators have discussed how equity (or fairness) should be assessed. Some consider that fairness can be achieved when applying a benefit theory approach to taxation; that is, tax should be allocated according to the benefits received by the individual. For example, some theorists sought to develop models to calculate these benefits. For a discussion of the contributions of Emil Sax, Knut Wicksell, Antonio de Viti de Marco, and Erik Lindahl, see Richard Musgrave, *The Theory of Public Finance* (McGraw Hill, 1959) 69-73. Other later theorists discuss fairness in the allocation of the tax burden on the principles of sacrifice theory. Examples include Edwin Seligman who advocated for progressive taxation. See Edwin Seligman, ‘Progressive Taxation in Theory and Practice’ (1908) 9(4) *American Economic Association Quarterly* 1, 150.

³ Chris Trotter, ‘Captain’s Call’ *Daily Blog* (Blog Post, 14 July 2023) <<https://thedailyblog.co.nz/2023/07/14/captains-call/>>; Shanti Mathias, ‘Greens come out swinging against ACT with expansive tax policy’ *The Spinoff* (Blog Post, 11 June 2023) <<https://thespinoff.co.nz/politics/11-06-2023/greens-come-out-swinging-against-act-with-expansive-tax-policy/>>; Riley Kennedy, ‘ACT would create a two-rate tax system’ *BusinessDesk* (Web Page, 15 May 2023) <<https://businessdesk.co.nz/article/finance/act-would-create-a-two-rate-tax-system>>.

to result in any perception of unfairness. Equally, it is unlikely to result in changing investment behaviours because as long as “excess” returns are being earned, the investment is still attractive, provided the excess returns are location specific and not easily replicated by sending the investment to a lower tax jurisdiction.

Economic rents, also known as exploitation rents,⁴ have been explained by Joseph Stiglitz as those returns derived by owners of capital because of exploitation, oppression, and lack of competition. This is differentiated from returns derived because of increases in marginal productivity. Economic rents are the excess returns, over and above the required cost of capital.

While Stiglitz acknowledges the origins of wealth inequality are impossible to identify, he argues the evidence points to the existence of the ‘exploitation model’.⁵ If exploitation or economic rents contribute to the growth of inequality of wealth, then taxing those rents must return some of that wealth back to the economy from where it was generated.

B Tax Justice and Economic Rents

Stiglitz highlights that inequality of wealth is not the same as inequality of capital.⁶ Just because the ultra-wealthy enjoy greater levels of wealth, does not mean society enjoys greater productivity due to higher amounts of invested capital. The two concepts are not the same. Capital is generally regarded as the funding that supports productive activity. This can be distinguished from wealth which encompasses ownership and control of assets such as land – the value of which may have been the subject of large capital gains. These assets do not necessarily contribute to the available pool of capital used for productive purposes. They may include chateaux and properties near the coast, luxury motor vehicles, wineries, and equestrian estates.

The question Stiglitz explores, after making the clear distinction between capital and wealth, is what may have contributed to the exponential growth in wealth inequality. While humans have a long history of wealth inequality, the post-World War II years gave the West a taste for egalitarianism. What has changed in the past few decades to reverse the trend toward greater sharing of resources? This question is essential with respect to tax justice as identifying where the source of inequality arises may help to target taxation at that source.

Stiglitz posits that it is not economic forces that have caused such growth in wealth inequality since the post-war era, but rather the consequences of politics. He argues that exploitation rents are a significant source of growth in wealth, and these rents arise primarily due to political influence. Stiglitz argues ‘that the real issue is not capitalism in the 21st century, but politics in the 21st century’.⁷

Exploitation rent, a more emotive term than economic rent and perhaps encompassing a cause within its description, comes about due to political influence or market power. Stiglitz gives examples of exploitation rents because of political influence such as the benefits accruing to

⁴ Joseph Stiglitz, ‘The Origins of Inequality, and Policies to Contain It’ (2015) 68(2) *National Tax Journal* 425.

⁵ *Ibid* 433.

⁶ *Ibid* 431.

⁷ *Ibid* 428. Stiglitz is responding to the thesis of Thomas Piketty, *Capital in the 21st Century* (Belknap Press, 2014) where he argues that inequality of wealth is a result of the returns on capital being higher than productivity. Stiglitz responds by arguing the exponential growth in wealth cannot be explained solely by the growth in returns on capital.

real estate moguls after land rezoning decisions, the law disallowing the US government to bargain for prices for drugs to be procured for Medicare patients, or government’s selling off state assets at discounted prices.⁸

Part III below argues that big technology enterprises exploit their market power to collect data and dominate many industries, enabling them to derive economic rents. By market power, what is meant is the ability of certain actors in the private sector to extract greater returns due to lack of competition in the market. Stiglitz highlights the returns in the finance sector accompanied by a lack of economic performance. As discussed further below, the ability of a few actors to collect vast quantities of data has resulted in a market power that allows those actors to derive exploitation or economic rents beyond the usual return. The holders of big data are outside New Zealand. Therefore, when New Zealand users give their data to these entities, this is effectively a transfer of wealth from New Zealand. This transfer increases global wealth inequality, to the detriment of New Zealand.

The next part briefly examines the world’s wealthiest people and their interests in the information technology sector. These people and their interests are contrasted with New Zealand’s wealthiest who mainly invest outside the technology sector. This part also examines the largest participants in the information technology sector globally and how they use data to create wealth.

III BIG DATA AND BIG WEALTH

A Growth in Wealth for Investors in Big Tech Industry

There has been a significant shift in wealth towards the big technology firms. This really means a shift in wealth in favour of the shareholders of those firms. The *Forbes* list of the wealthiest people in the world includes five people within the top ten who are heavily invested in technology businesses.⁹ They are Jeff Bezos, Larry Ellison, Bill Gates, Carlos Slim Helu and Steve Ballmer. Jeff Bezos founded Amazon and continues to invest in this corporation although he is no longer the CEO. Larry Ellison is the co-founder of Oracle, a software developer. He also invests heavily in Tesla. Bill Gates made his wealth through co-founding Microsoft. Carlos Slim Helu is Mexico’s richest man and with his family, controls Latin America’s largest telecommunications firm, América Móvil. Finally, Steve Ballmer made his wealth through leading, as CEO, and investing in Microsoft.

While the wealthiest man in the world, Bernard Arnault, is known primarily for his investments in luxury brands such as Louis Vuitton and LVMH, he also invests heavily in technology enterprises such as Netflix and ByteDance (TikTok).¹⁰ Likewise, the investments of Warren Buffet of Berkshire Hathaway include technology stocks too, notably Apple.¹¹

Elon Musk is also within the top ten wealthiest people in the world and his main business success has been with respect to his investment in Tesla, a car manufacturer. Tesla, however, is unique in that the vehicles all run on electric power and are operated by computer systems. Essentially, while being a car manufacturer, Tesla is also in the business of big data. Tesla

⁸ Stiglitz (n 4) 432.

⁹ ‘World’s Billionaire List, Rich List 2023’ *Forbes* (online, 2023) <<https://www.forbes.com/billionaires>>.

¹⁰ *Ibid.*

¹¹ *Ibid.*

vehicles are designed to become the next self-driving vehicles. To achieve this goal, Tesla monitor the data of the vehicles it sells, and driver behaviours. This data is provided to Tesla via a series of sensors and smart technologies within the vehicles. Tesla is also a technology-based corporation, using the data collected from its users to exploit for commercial gain.¹²

The technology investors in the top ten wealthiest people in the world are all US-based. The wealthiest technology investor in China sits at number 26 in the *Forbes* rich list. Wealth concentration is centred in the US.

New Zealand has its own ‘rich list’. The 2022 list, like previous lists, includes business investors in a variety of sectors but only the wealth of Rod Drury, founder of Xero, a cloud-based accounting software package, arose from technology investment.¹³ Only three New Zealanders feature in the *Forbes* rich list and only Graeme Hart, who invests mainly in packaging, ranks in the top 1,000. New Zealand’s concentration of wealth appears to be more evenly spread across different industries, compared with the world’s wealthiest people for whom many have a heavy concentration of investment in the information technology sector.

Of course, many investors, including pension funds, participate in wealth accumulation from investing in the information technology sector. Nevertheless, the greatest concentration of individual wealth arises from investment in this sector.

This next section focusses on the corporations through which this wealth has been created and argues that data collection has enabled significant shifts in wealth to occur already and this may be exacerbated further if we move into a fourth industrial revolution. More than just shifts in data, this article argues that the shifts in wealth reflect the economic rents obtained through market power, enabled by the collection of vast amounts of user data.

B Exploiting Data to Create Wealth

This part first considers what the third and fourth industrial revolutions are. Then the activities of the world’s dominant technology enterprises are examined, with reference to their impact in New Zealand.

What are the Third and Fourth Industrial Revolutions?

The third industrial revolution entails the digitisation of manufacture and the use of online platforms. People use online platforms, such as Uber, Netflix, Air BNB, Paypal, Alibaba, and Skyscanner, for convenient access to a broad range of services.

The fourth industrial revolution involves greater integration of the information age into the everyday lives of humans, encompassing both the internet of things and the internet of bodies. The fourth industrial revolution has been described as ‘blurring the lines between the physical, digital, and biological spheres’.¹⁴

¹² See Azamat Abdoullaev, ‘How Tesla Is Using Big Data: Benefits & Challenges of Big Data in Self Driving Cars’ *BBN Times* (Web Page, 20 September 2021) <<https://www.bbntimes.com>>.

¹³ The NBR list 2022 is behind a paywall, but the list can be found at Mark Quinlivan, ‘NBR rich list: NZ’s top wealth creators unveiled’ (Web Page, 30 May 2022) <<https://www.newshub.co.nz/home/money/2022/05/nbr-rich-list-nz-s-top-wealth-creators-unveiled.html>>.

¹⁴ Min Xu, Jeanne David, and Suk Hi Kim, ‘The Fourth Industrial Revolution: Opportunities and Challenges’ (2018) 9(2) *International Journal of Financial Research* 90, 91.

The internet of things is the digital connection between things and people, enabled by the introduction of 5G. Anything and anyone can be equipped with an RFID tag, allowing it to be tracked and monitored. This might include food, home appliances, packages, and people. The internet of things will allow tracking and possibly control the movement of ‘things’ remotely.

The internet of bodies is the next possible development. This involves collecting the physical data of humans by using a range of devices that can be implanted, swallowed, or worn.¹⁵ The most common use of this technology is smartwatches that are worn on the body and collect and track personal body-related information. In 2017, the US Food and Drug Administration approved the first use of a digital pill that is ingested and transmits data from inside the body to a smartphone or other device.¹⁶ These technologies can transfer large quantities of very personal data to organisations who will be able to commercialise the information.

More immediately, our personal data is being collected and used for commercial purposes using third industrial revolution technologies. Next, the article considers how Apple, Microsoft, Alphabet, Amazon, and Meta use this data to create wealth. These organisations have been selected as they have the largest market capitalisations in the world within the technology sector.

The technology sector dominates the largest companies in the world by market capitalisation. Within the top ten companies at the time of this research are Apple Inc, Microsoft Corp, Alphabet Inc, Amazon.com Inc, Tesla Inc, NVIDIA Corp, Taiwan Semiconductor Manufacturing Co Ltd, and Meta Platforms Inc – all information technology-based businesses. Saudi Aramco, a petroleum company occupies the second spot and Berkshire Hathaway Inc, an investment company occupies the seventh position. Berkshire Hathaway invests heavily in the technology sector. Tesla is included with the technology companies as its success is largely due to having produced electronic motor vehicles with sophisticated computer technology.

1 *Apple*

Apple has been the largest company in the world by market capitalisation since 2012, although they were overtaken by the petrochemical company Saudi Aramco during 2019 and 2020 for a time.¹⁷ Apple derives its revenue mainly from the sale of physical products such as iPhones, iPads, Apple Watch and Mac computers. They also make 20% of their revenue from provision of cloud-space services and after-care services. All Apple users have an iCloud account and Apple collect data on their users that give them a unique competitive advantage with respect to development and sales of new product. Not only are they able to gain intelligence on customer preferences but they are also able to access customers directly. Apple have significant market penetration in many countries around the world and the scale of their database gives them a significant competitive advantage. This is an example of how the scale of the organisation and the data they hold both creates competitive advantage and excludes potential new entrants to the market.

¹⁵ Xiao Liu, ‘Tracking how our bodies work could change our lives’ *We Forum* (Web Page, 4 June 2020) <<https://www.weforum.org/agenda/2020/06/internet-of-bodies-covid19-recovery-governance-health-data>>.

¹⁶ ‘FDA approves pill with sensor that digitally tracks if patients have ingested their medication’ *U.S. Food & Drug Administration* (Media Release, 13 November 2017) <<https://www.fda.gov/news-events/press-announcements/fda-approves-pill-sensor-digitally-tracks-if-patients-have-ingested-their-medication>>.

¹⁷ Andrea Murphy and Hank Tucker, ‘The Global 2000’ *Forbes* (online, 8 June 2023) <<https://www.forbes.com/lists/global2000/?sh=726280485ac0>>.

Apple held 44% of the market share for mobile phone sales in New Zealand in 2021.¹⁸ However, the company appears to have dropped to second place in 2022 at 40% market share, behind Samsung.¹⁹ Nevertheless, Apple dominates mobile phone sales in New Zealand in a market with a high level of mobile phone ownership.²⁰ Apple dominates the tablet sector in New Zealand with a market share of 76% in 2021, well ahead of their rival, Samsung.²¹

2 Microsoft

Microsoft primarily operates in the software sector, although the company also occupies a significant place in the hardware market, selling gaming devices and personal computers. Microsoft is most well-known for their Microsoft Office suites of software products which have swept the business world. However, they are also the owners of the Xbox and LinkedIn. Microsoft describes data as the most strategic asset for every organisation.²² Like Apple, Microsoft collects and uses data to develop their own business. Algorithms are applied to the data collected from users and provide information such as when someone may be ready to buy an item, or when a software upgrade may be required, or when someone may be interested in online gaming.²³ Microsoft New Zealand's revenue surpassed \$1 billion in the year to 30 June 2022.²⁴ According to some statistics, LinkedIn has 2.5 million members in New Zealand in 2023.²⁵

3 Alphabet

Alphabet is best known for its search engine Google. According to Statista, Google has a global market penetration of around 85%, with several other search engines sharing the other 15% of the market.²⁶ In New Zealand, Google's market share is over 95%.²⁷ Alphabet also owns Google Maps, Gmail, YouTube, and Android. Alphabet, perhaps more than Apple and Microsoft, leverages the use of its database for commercial gain. Ownership of Google Maps allows Alphabet access to the location of its users – providing significant data on the interests and habits of its users. Google generates 80% of their revenue from advertising. Their market

¹⁸ Christopher Hughes, 'Yearly market share of mobile device vendors in New Zealand 2012-2021' *Statista* (Web Page, 3 January 2023) <<https://www.statista.com/statistics/1322261/new-zealand-smartphone-vendors-market-share>>.

¹⁹ Sasha Karen, 'Samsung on top of Kiwi smartphone market' *New Zealand Reseller News* (Web Page, 24 May 2022) <<https://www.reseller.co.nz/article/698419/samsung-top-kiwi-smartphone-market>>.

²⁰ New Zealand has more mobile phone connections than population according to Statista. See 'Smartphone Market in New Zealand – statistics and facts' *Statista* (Web Page, 23 February 2023) <<https://www.statista.com/topics/9745/smartphone-market-in-new-zealand/#topicOverview>>. This appears to be higher per capita than the market penetration in the United States.

²¹ Christopher Hughes, 'Market share of tablet vendors in New Zealand 2012-2021' *Statista* (Web Page, 3 January 2023) <<https://www.statista.com/statistics/1325647/new-zealand-tablet-vendors-market-share>>.

²² Satya Nadella, 'Microsoft Inspire 2021' Microsoft (Report, 2021) <<https://news.microsoft.com/wp-content/uploads/prod/2021/07/Microsoft-Inspire-2021-Satya-Nadella.pdf>>.

²³ 'The World's Most Valuable Resource Is No Longer Oil, but Data' *The Economist* (online, 6 May 2017) <<https://www.economist.com>>.

²⁴ Rob McNeill, 'Microsoft NZ storms past \$1B in revenue for 2022' *New Zealand Reseller News* (Web Page, 7 December 2022) <<https://www.reseller.co.nz/article/703874/microsoft-nz-storms-past-1b-revenue-2022/?fp=2&fpid=1>>.

²⁵ Simon Kemp, 'Digital 2023: New Zealand' *DataReportal* (Web Page, 13 February 2023) <<https://datareportal.com/reports/digital-2023-new-zealand>>.

²⁶ Tiago Bianchi, 'Worldwide Market Share of Search Engines' *Statista* (Web Page, 28 August 2023) <<https://www.statista.com/statistics/216573/worldwide-market-share-of-search-engines>>.

²⁷ 'Search Engine Market Share New Zealand' *Statscounter* (Web Page, July 2023) <<https://gs.statscounter.com/search-engine-market-share/all/new-zealand>>.

position as the dominant search engine globally stands them in good stead for selling advertising. Like other information technology businesses, they use algorithms to turn the data collected into information they can exploit commercially. Not only do they collect data on searches, but Google use ‘cookies’ to collect information on a user’s movements around the internet. Cookies attach to a user’s device and send information back to Google. Some cookies provide a useful function for the user such as remembering details from a user’s past visit to the page. However, those same cookies come with a cost; the data on internet movements is collected by Google in order to target advertising. Google is then paid per ‘click’ on advertisements. It is in Google’s interest to ensure they have the best information on the user to ensure they display advertisements most likely to attract the user’s attention. Alphabet also owns YouTube which reports 4.24 million users in New Zealand as at early 2023.²⁸

Alphabet has attracted fines in more than one EU jurisdiction due to breaches of the EU’s General Data Protection Regulations (GDPR).²⁹ In 2019, France imposed a fine of €50m on the company and a further €150m in 2021.³⁰ Spain, Sweden and Belgium have also imposed fines on alphabet during the 2020 to 2022 period.

4 Amazon

Amazon is the world’s largest online shopping platform. Like Alphabet, Amazon has access to a significant database of users’ interests and spending habits. Amazon’s revenue is mainly generated by online sales but also by freight, digital media content and advertising. Like Alphabet, Amazon is able to ensure the right advertisements and products are put in front of a user based on the data collected from that user. The scale of the database and precision of the algorithms provide Amazon with a significant competitive advantage, locking out potential competition. In 2018, the Californian legislature made it mandatory for corporations to disclose the information they hold on a customer, upon request. Requests to Amazon disclosed the volume and quality of information being collected, including voice recordings through use of Alexa.³¹ As noted in one investigation:

Amazon collects data on consumers through its Alexa voice assistant, its e-commerce marketplace, Kindle e-readers, Audible audiobooks, its video and music platforms, home-security cameras and fitness trackers. Alexa-enabled devices make recordings inside people’s homes, and Ring security cameras capture every visitor. Such information can reveal a person’s height, weight and health; their ethnicity (via clues contained in voice data) and political leanings; their reading and buying habits; their whereabouts on any given day; and sometimes whom they have met.³²

Like Alphabet (Google), Amazon has been the subject of substantial fines due to non-compliance with the EU’s regulations on data privacy, totalling €748m in 2021 and 2022.

²⁸ Kemp (n 25).

²⁹ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (General Data Protection Regulation). These regulations seek to control the collection and use of data by corporations.

³⁰ For a record of breaches of the GDPR, see ‘GDPR Enforcement Tracker’ *Enforcement Tracker* (Web Page) <<https://www.enforcementtracker.com>>.

³¹ ‘Alexa, how much does Amazon know about me?’ *Al Jazeera* (Web Page, 19 November 2021) <<https://www.aljazeera.com/economy/2021/11/19/how-much-does-amazon-know-about-you>>.

³² *Ibid.*

Due to New Zealand’s high level of internet usage, there is an expectation that online shopping will continue to grow from its 2019 rate of 8.9% of all retail sales.³³ However, as at 2018, Amazon did not appear to make the top ten of New Zealand’s most popular online stores.³⁴

5 *Meta Platforms*

Meta operates Facebook, WhatsApp, Instagram and Messenger. These social media services are free for users, and they all have large and global user bases. Meta derives revenue from its advertising on Facebook and Instagram. Meta use ‘data signals from user activity’ from websites that Meta does not control using cookies that track users even when not using Meta’s platforms. Once again, it is the scale of the database collected from users that enable Meta to create sophisticated algorithms producing information able to target advertising to maximise ‘clicks’.

Meta has been the subject of many fines in the EU under the GDPR, especially in Ireland and France.³⁵

Meta has a strong hold on social media consumption in New Zealand. According to some statistics, there are 4.24 million social media users in New Zealand in January 2023 and 2.95 million of these users are active on Facebook.³⁶ Estimates show that Instagram has 2.15 million users. Messenger has a user base in New Zealand of 2.65 million.

6 *Tencent and ByteDance*

All the examples used above, Apple, Microsoft, Amazon, Alphabet, and Meta are US corporations –specifically organisations operating in the heart of Silicon Valley. However, China also has also produced global information technology enterprises that use similar techniques for collecting data and applying algorithms to create information able to be exploited for commercial gain. Tencent, which owns WeChat and QQ.com, is one example. These platforms serve the largest domestic economy in the world and while they may not appear to be so present in New Zealand, there is a presence as many Chinese immigrants and students use the platforms while living in New Zealand. The other significant Chinese example that has a deep penetration into the New Zealand market is ByteDance, best known for their social media platform, TikTok. According to statistics from TikTok’s advertising revenue, they are estimated to have 1.65 million users in New Zealand³⁷ – not an insignificant proportion of the total population of 5.2 million people.

These corporations are identified here as they represent the largest organisations in the world in terms of market capitalisation. This means that the largest shareholders in these corporations, who were invariably early investors enjoy immense wealth. Most significantly, the market capitalisation of these organisations has increased exponentially over the past decade. In 2013, Apple become the largest corporation in the world with a market

³³ ‘Share of People Doing Selected E-Commerce Activities in New Zealand as of January 2021’ *Statista* (Web Page, 10 July 2023) <<https://www.statista.com/statistics/681785/new-zealand-e-commerce-activities-by-type/>>.

³⁴ ‘New Zealand: top 10 online stores 2018, by net sales’ *Statista* (Web Page, 19 June 2023) <<https://www.statista.com/forecasts/1014511/top-online-stores-new-zealand-ecommerce>>.

³⁵ ‘GDPR Enforcement Tracker’ (n 30).

³⁶ Kemp (n 25).

³⁷ *Ibid.*

capitalisation of US\$500 billion.³⁸ Now, in 2023, Apple is the largest corporation in the world with a market capitalisation of US\$2.7 trillion. A more than quadrupling of growth has made the shareholders very wealthy. The same could be said for the other technology firms discussed above. In 2013, while Apple had a market capitalisation of US\$500 billion, ExxonMobil had a market capitalisation of US\$425 billion. ExxonMobil now has a market capitalisation of US\$441 billion.³⁹ It has grown during the past decade too but not at the rates of the technology enterprises.

C How Data Creates Wealth

All the corporations identified above collect and exploit data. It has been said that the exponential gains in wealth being derived by this sector are a reflection on their special access to data. The very nature of their business gives them access to the asset most valuable to them.

In 2017, *The Economist* published an article titled ‘The world’s most valuable resource is no longer oil, but data’.⁴⁰ The article describes the process under which more data creates exponentially more value:

This abundance of data changes the nature of competition. Technology giants have always benefited from network effects: the more users Facebook signs up, the more attractive signing up becomes for others. With data there are extra network effects. By collecting more data, a firm has more scope to improve its products, which attracts more users, generating even more data, and so on. The more data Tesla gathers from its self-driving cars, the better it can make them at driving themselves – part of the reason the firm, which sold only 25,000 cars in the first quarter, is now worth more than GM (General Motors), which sold 2.3m. Vast pools of data can thus act as protective moats.

Access to data also protects companies from rivals in another way. The case for being sanguine about competition in the tech industry rests on the potential for incumbents to be blindsided by a start-up in a garage or an unexpected technological shift. But both are less likely in the data age. The giants’ surveillance systems span the entire economy: Google can see what people search for, Facebook what they share, Amazon what they buy. They own app stores and operating systems and rent out computing power to start-ups. They have a “God’s eye view” of activities in their own markets and beyond. They can see when a new product or service gains traction, allowing them to copy it or simply buy the upstart before it becomes too great a threat. Many think Facebook’s \$22bn purchase in 2014 of WhatsApp, a messaging app with fewer than 60 employees, falls into this category of ‘shoot-out acquisitions’ that eliminate potential rivals. By providing barriers to entry and early-warning systems, data can stifle competition.

For the reasons outlined in the article, databases are the source of market power. This market power can be exploited for commercial gain. As discussed above, market power in an uncompetitive environment, results in economic rents. The key thesis of this article is that when some organisations have access to large amounts of global data, they can have total domination of the market, making it difficult for new entrants to succeed. When a new entrant does make some traction, the dominant entity can acquire the potential competitor.

³⁸ Ranking Charts, ‘Top Ten Companies by Market Cap (1979 – 2021)’ (You Tube)
<<https://www.youtube.com/watch?v=Z93yWXb9Tb0>>.

³⁹ ‘Exxon Market Cap 2010-2023’ *Macrotrends* (Web Page)
<<https://www.macrotrends.net/stocks/charts/XOM/exxon/market-cap>>.

⁴⁰ ‘The World’s Most Valuable Resource Is No Longer Oil, but Data’ (n 23).

What is known about technology entities is that they can create wealth from their databases. The larger the database, the greater the wealth opportunities. Therefore, it is in the interest of successful firms to suppress the rise of competitors in order that they do not have to share access to userbases.

Shoshana Zuboff describes the widespread collection and commercialisation of personal data as ‘surveillance capitalism’.⁴¹ Zuboff describes this as a mutation of industrial capitalism. According to Zuboff, while industrial capitalism exploited nature, surveillance capitalism exploits human nature.⁴² While surveillance capitalism centres on profit-making enterprises, it goes hand in hand with government surveillance. One of Zuboff’s criticisms of surveillance capitalism is that it prospers at the expense of the human experience. She, and many other commentators, argue surveillance capitalism (and government surveillance) pose a severe threat to freedom, democracy, and privacy. However, prospering at the expense of the human experience is most relevant with respect to increasing wealth inequality. As Zuboff argues, ‘[s]urveillance capitalism unilaterally claims private human experience as a source of free raw material that can be brought into the marketplace, used for production and ultimately for sale. Private human experience becomes a commodity in this new economic model.’⁴³

Zuboff views surveillance capitalism as exploitative. The inputs into the business model are free, they are personal, and they are often accessed with little awareness of the data provider.⁴⁴ As Zuboff points out, many of the providers of the data might not care whether they give away their data for free. However, they may be concerned about the shifts in wealth inequality to a few powerful interests. Unless the links between giving away free data and the shifts in wealth are recognised, global inequality will continue to grow due to ignorance.

The ignorance or lack of care with respect to gifts of free personal data may only grow as fourth industrial revolution technologies become more commonplace. Already thousands of Swedes have microchip implants embedded under the skin to enjoy the convenience of accessing their homes, vaccine passes, or gym entry.⁴⁵ While currently the implants are passive and only store information, it seems reasonable to expect it is only a matter of time until they are being used to transfer information from the human to somewhere else – be it a corporate or a government. Uploading data from inside the body opens the door to a deeper level of commercialisation. A human’s most personal data could be used to sell medical products, ensure compliance with medical advice, and inform providers of insurance of the health status of the insured person.

The internet of things must also result in greater access to data from objects. In many cases, the internet of things will attach an RFID (radio-frequency identification) tag onto objects in order that they can be tracked, managed, and monitored. The internet of things may also involve installing sensors or software into objects for the same purposes. The outcome is the ability to exchange data between objects or systems. Once again, the result will be more availability and use of data with the potential for greater transfer of wealth to those able to exploit the data for commercial purposes.

⁴¹ Shoshana Zuboff, ‘Surveillance Capitalism and the Challenge of Collective Action’ (2019) 28(1) *New Labor Forum* 10.

⁴² Alex Jenkins, ‘Shoshana Zuboff on the age of surveillance capitalism’ *Contagious* (Web Page, 1 September 2019 <<https://www.contagious.com/news-and-views/shoshana-zuboff-on-the-age-of-surveillance-capitalism>>.

⁴³ *Ibid.*

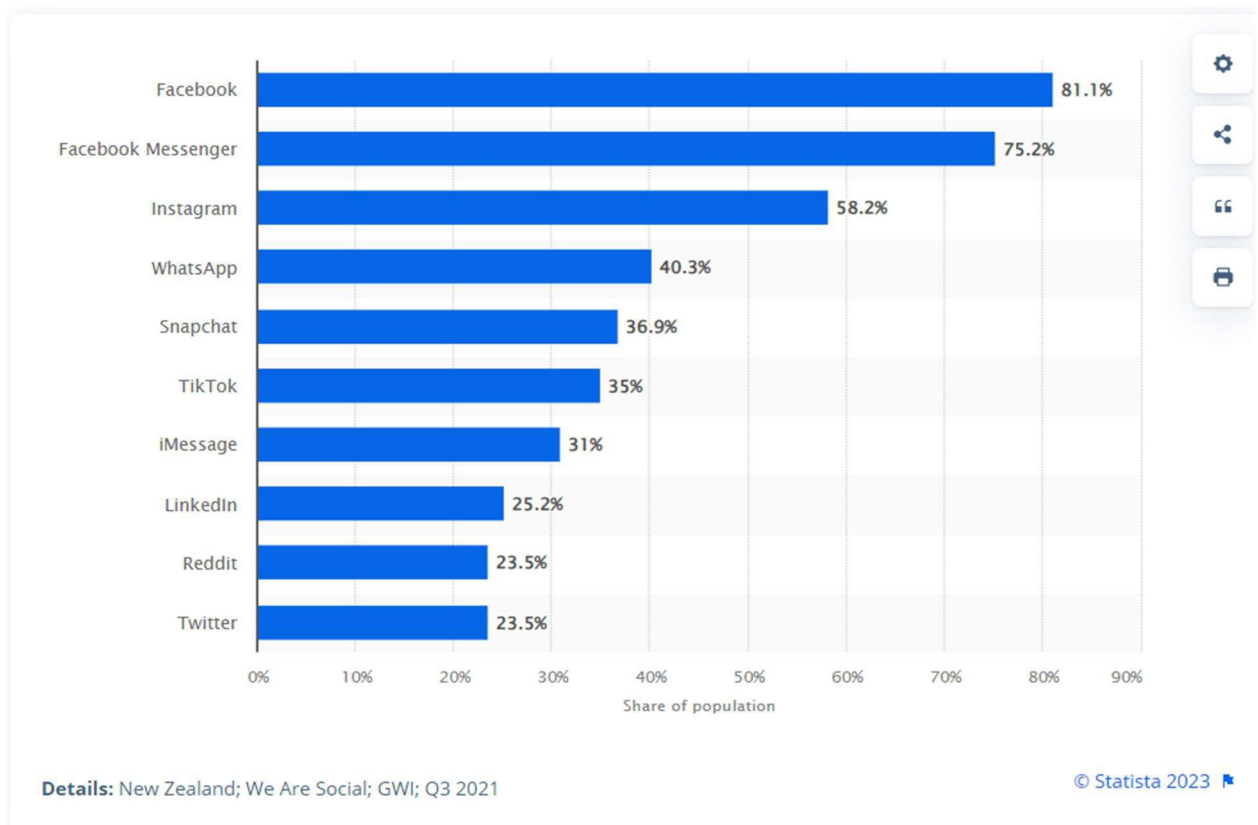
⁴⁴ *Ibid.*

⁴⁵ Maddy Savage, ‘Thousands of Swedes are Inserting Microchips under their Skin’ *NPR* (Web Page, 22 October 2018) <<https://www.npr.org/2018/10/22/658808705/thousands-of-swedes-are-inserting-microchips-under-their-skin>>.

D New Zealand’s Contribution to the Wealth of the World’s Richest

According to Statista, 94% of New Zealand’s population are active internet users.⁴⁶ This places New Zealand near the top of internet users globally. Of the internet users in New Zealand, common use includes communications, obtaining information, entertainment, undertaking transactions, and learning activities.⁴⁷ Most users are using the internet several times a day, or at least daily.⁴⁸

The majority of internet users are communicating over the internet via email and messaging services.⁴⁹ Many also make voice or video calls, post content and re-post content. This implies the use of email services such as Gmail and Microsoft and social media platforms such as Facebook, Instagram, WhatsApp and Twitter. Only 7% of users do not use email at least weekly and only 12% of users do not use messaging services at least weekly. If this is representative of New Zealand, over 80% of New Zealanders use social media messaging services on a weekly basis at a minimum and most are using them much more frequently. According to Statista, New Zealand’s social media usage is spread across the providers as follows:⁵⁰ Figure 1: Leading social networks in New Zealand in 3rd quarter of 2021



⁴⁶ Christopher Hughes, ‘Internet Users as a Percentage of the Total Population New Zealand 2015-2021’ *Statista* (Web Page, 3 January 2023) <<https://www.statista.com>>.

⁴⁷ Antonio Diaz Andrade, Mary Hedges, Gail Pacheco and Alexandra Turcu, ‘The World Internet Project New Zealand 2021’ (New Zealand Work Research Institute, 2021).

⁴⁸ *Ibid* 11.

⁴⁹ *Ibid* 13.

⁵⁰ Christopher Hughes, ‘Leading social networks in New Zealand in 3rd quarter of 2021’ *Statista* (Web Page, 3 January 2023) <<https://www.statista.com/statistics/681840/new-zealand-most-popular-social-media-networks/>>.

Many of these social media platforms are discussed above. All of them are owned by US corporations, other than TikTok. From these statistics, we can see that over 80% of New Zealanders are frequently using these US social media and messaging services, plus TikTok. The first four social media providers are all owned by Meta – the ninth largest company in the world by market capitalisation.⁵¹

Another common internet activity of New Zealand users is to access news content.⁵² While news may come from a variety of sources, most of it comes from large corporate or government-funded organisations. In New Zealand, the most trafficked online news sites are nzherald.co.nz (NZME), yahoo.com, RNZ, Stuff, and Newshub.⁵³

NZME is publicly listed on the New Zealand stock exchange. The shareholding is dispersed although the largest shareholding is Citicorp Nominees Ltd with a 23% share, a foreign investment company.⁵⁴ Citicorp Nominees Limited is part of a US based banking and financial services group, ranked 147th in the world by market capitalisation.⁵⁵ NZME includes the most popular internet news site in New Zealand within its portfolio, nzherald.co.nz.

Yahoo.com is ultimately owned by US based Apollo Global Management Inc, ranked 407th in the world by market capitalisation.⁵⁶

RNZ is a New Zealand Crown Entity news site, funded by the government.⁵⁷

Stuff is owned by a single domestic investor who purchased the company from its foreign owners in May 2020 for \$1.⁵⁸ However, the company has benefited from substantial government funding⁵⁹ enabling the employment of many additional journalists provided specific content is delivered and users are tracked so data could be provided to the government.⁶⁰

Newshub is owned by US media company Warner Bros Discovery Inc.⁶¹ Newshub includes television, radio, and online news content. Its ultimate holding company is ranked 520th in the world by market capitalisation.⁶²

Increasingly these news sites are using paywalls to raise revenue,⁶³ but they have relied upon advertising up until now. They use cookies to track users' movements around the internet and can target advertising accordingly. As Stuff states in its Cookies Policy, one of the purposes

⁵¹ 'Largest Companies by Market Cap' *Companiesmarketcap* (Web Page) <<https://companiesmarketcap.com/>>.

⁵² Andrade et al (n 47) 14.

⁵³ 'Top Websites Ranking' *Similarweb* (Web Page) <<https://www.similarweb.com/top-websites/new-zealand/>>.

⁵⁴ See 'Companies Register' *New Zealand Companies Office* (Web Page, 2023) <<https://app.companiesoffice.govt.nz/companies/app/ui/pages/companies/1181195/shareholdings>> (search conducted 9 June 2023).

⁵⁵ 'Largest Companies by Market Cap' (n 51).

⁵⁶ *Ibid.*

⁵⁷ *Crown Entities Act 2004* (NZ) sch 2.

⁵⁸ Luke Malpass and Tom Pullar-Strecker, 'Stuff CEO Sinead Boucher buys the company, announces "great new era"' *Stuff* (Web Page, 25 May 2020) <<https://www.stuff.co.nz/business/121613758/stuff-ceo-sinead-boucher-buys-the-company-announces-great-new-era>>.

⁵⁹ 'Journalism funding' *NZ On Air* (Web Page) <<https://www.nzonair.govt.nz/funding/journalism-funding/#funding-decisions>>.

⁶⁰ 'Public Interest Journalism Fund: Interim Report 2021-2023' *NZ On Air* (Report) <https://d3r9t6niqlb7tz.cloudfront.net/media/documents/NZOA_PJIF_Interim_Report_FINAL.pdf>.

⁶¹ 'Discovery NZ Limited' *New Zealand Companies Office* (Web Page) <<https://app.companiesoffice.govt.nz/>>.

⁶² 'Largest Companies by Market Cap' (n 49).

⁶³ *The New Zealand Herald*, eg, has installed a paywall for some of its online news stories.

of cookies is to enable them to ‘keep track of products or services you view, so that we can send you news about those products or services’.⁶⁴

Another area of high internet use in New Zealand is for entertainment. A large volume of users plays online games, download and listen to music, and watch videos online.⁶⁵ The most popular sites in this domain include YouTube, Netflix and Pornhub.⁶⁶ As discussed above, YouTube is owned by Alphabet. Netflix is listed on the US Nasdaq and ranks 58th in the world by market capitalisation.⁶⁷ Pornhub is owned by Canadian-based (Luxembourg owned private company), MindGeek. Until 2023, it was owned by Austrian, Bernard Bergemar.⁶⁸ In 2023, MindGeek was acquired by a Canadian private equity firm, Ethical Capital Partners.⁶⁹

Except for some of New Zealand’s domestic news sites, most of the internet usage in New Zealand is on sites owned by foreign interests – many of whom are very large US platforms. Even the popular, locally established trading website, trademe.co.nz, is owned by overseas interests.⁷⁰ All of these sites collect user data and use that data for commercial purposes. New Zealanders are generous contributors to the databases of the large global technology-based enterprises. As a developed nation state, further development into the fourth industrial revolution with respect to the internet of things and the internet of bodies is likely to result in even more data transfer from New Zealand users. New Zealanders appear to be willing to adopt new technology. While many New Zealanders may be concerned about the growth in wealth inequality within New Zealand, we must also address the shifts in wealth away from New Zealand on a global level.

If data is viewed as a wealth transfer, New Zealand users are making a significant contribution, as a small population, to the global shift in wealth to an increasingly concentrated group of recipients. In this respect, New Zealand users are transferring wealth directly and contributing to wealth inequality at a global level.

The pertinent question is whether we can do anything to reduce the shifts in wealth, and whether tax may be used as a tool to redistribute some of the wealth transfer back into the New Zealand tax base.

⁶⁴ ‘Stuff Cookies Policy and targeting and tracking Policy’ *Stuff* (Web Page, April 2022) <<https://www.stuff.co.nz/about-stuff/300062240/stuff-cookies-policy-and-targeting-and-tracking-policy>>.

⁶⁵ Andrade et al (n 47) 15.

⁶⁶ ‘Top Websites Ranking’ (n 53).

⁶⁷ ‘Market Capitalisation of Netflix’ *Companiesmarketcap* (Web Page) <<https://companiesmarketcap.com/netflix/marketcap>>.

⁶⁸ See Patricia Nilsson, ‘MindGeek: the secretive owner of Pornhub and RedTube’ *Financial Times* (online, 17 December 2020) <<https://www.ft.com/content/b50dc0a4-54a3-4ef6-88e0-3187511a67a2>>.

⁶⁹ Dan Milmo, ‘Pornhub owner MindGeek sold to private equity firm’ *The Guardian* (online, 17 March 2023) <<https://www.theguardian.com>>.

⁷⁰ Trademe.co.nz was established by a New Zealander, Sam Morgan. However, in 2006 the owners sold it to Fairfax for NZ\$700m. See Claire Trevett, ‘Morgan’s big trade nets him \$227m’, *The New Zealand Herald* (online, 7 March 2006) <<https://www.nzherald.co.nz/nz/morgans-big-trade-nets-him-227m/URVP53E5UST4C73EQQOYVVVWQ/>>. It is now owned by a British private equity firm, Apax Partners.

IV TAX AND BIG DATA

A Actions to Reduce Wealth Transfer

The most direct tool to reduce the volume of free data moving offshore is regulation. Regulating collection of data from New Zealand citizens or from New Zealand-based sources is one way to manage the data shifts. This could occur in a myriad of ways. However, there may be a sense of infringing upon the freedoms of willing parties to make a contract between themselves. For many people, the benefits associated with the free use of social media such as Facebook and TikTok far exceeds any potential threat of data collection. For a government to regulate the ability of consensual parties coming to this arrangement seems draconian.

The EU and some US states have responded by legislating that users have a right to access the data used and kept by corporates.⁷¹ This is a useful facility for the few users that want this information but does not deal with the inequality of wealth resulting from the data transfers.

The EU and the UK have also introduced regulation on how data can be used, and the EU have handed out some substantial fines to those organisations who breach the restrictions.⁷² However, the essence of the regulations is to require organisations to collect only the data required to carry out a specific purpose for the time required to achieve that purpose. These facts should be explained to the person from whom the data is collected.⁷³ While limiting the ability to collect and use data may have had an effect, there is no doubt the databases of the world's largest technology enterprises have continued to expand since the introduction of these regulations – indicating that even if they have been a handbrake, they have by no means kept a lid on the continued collection of data from online users.

This article focusses on wealth transfer rather than the other concerns around data collection such as infringements upon democracy and shifts in global power. Of course, the concerns are interrelated. With increased wealth comes power and a greater ability to influence democracy. Next the article will consider how the New Zealand government might use tax as a tool to reduce the wealth transfer.

B Reducing Wealth Transfer Associated with Free Data Transfer

Tax is often used as a tool for redistribution. The question posed here is whether we can use taxation to deal with the problem of wealth transfer taking place when data is transferred to these large foreign enterprises at no cost.

While this article deals quite specifically with the issue of wealth transfer through transfer of free data, there has been significant focus on the broader issue of taxing multinational activity in destination countries, especially multinationals in the digital sector.⁷⁴ Measures such as

⁷¹ See Regulation (EU) 2016/679 (n 29); eg, *California Consumer Privacy Act 2018* (Cal).

⁷² 'GDPR Enforcement Tracker' (n 30).

⁷³ Article 5(1) and Recital (39) of the General Data Protection Regulations.

⁷⁴ One of the original movements were the 2013 OECD reports on Base Erosion and Profit Shifting (BEPS): 'Addressing Base Erosion and Profit Shifting' (OECD, 12 February 2013) and 'Action Plan on Base Erosion and Profit Shifting' (OECD, 19 July 2013). More recent work under the OECD Action Plans has been the OECD work on fairer and more comprehensive taxation of the digital economy, notably: 'Tax Challenges Arising from Digitalisation of the Economy – Global Base Erosion Model Rules (Pillar One)' (OECD, 8

digital services taxes (DST), the diverted profits tax (DPT), and the OECD’s Pillar One and Pillar Two proposals⁷⁵ have been mooted and in some cases, implemented.⁷⁶ These measures use revenue or profit as the tax base. Digital services tax is imposed at a low rate upon the revenues for digital services being imported into a country. For example, the United Kingdom DST is 2% of the revenue generated by search engines, social media platforms and online marketplaces by way of UK based users.⁷⁷ DPT is aimed at taxing profits relating to substantial activities in a state that may have gone untaxed due to the ability of large MNEs to divert profits out of the state. For example, Australia imposes a tax of 40% on the profits of large MNEs that have been diverted to lower tax jurisdictions to avoid paying Australian income tax.⁷⁸ The Pillar One proposal also operates to allocate profits of multinational digital enterprises across the states in which they operate. The Pillar Two proposals provide a mechanism to ensure a minimum income tax of 15% is paid on all multinational profits on a global basis. All these measures impose tax on revenues or profits.

New Zealand has not implemented any of the measures above as yet although a DST is waiting in the wings should a global solution not be reached.⁷⁹ The proposed DST is a 3% tax on revenues generated from New Zealand users of digital services, including intermediation platforms like Uber and eBay, social media platforms like Facebook, content sharing sites like YouTube, and search engines and the sale of user data.⁸⁰

All these taxes rely on the generation of revenues or profits. However, as discussed above, the wealth of these organisations stems from the databases they hold. It is this ‘asset’ that is the source of their wealth. These large multinational digital businesses generate income and profits by applying algorithms to the data they have accumulated from user activity.⁸¹ The thesis here is that the collection of user data could be a tax base. A tax base does not need to be limited to revenue and profits.

For some years, there has been a growing international awareness of the value users create for multinational digital businesses. In 2013, the OECD issued its Action Plan for addressing base erosion and profit shifting (BEPS) highlighting the importance of user participation in creating value for these enterprises.⁸² In 2018, in the United Kingdom, the HMRC expressed similar views, and this was also endorsed by the European Commission in the same year.⁸³ The European Commission proposed that taxing rights based on user participation should arise where an entity has a significant digital presence in the territory. A significant digital presence is determined in part by the size of the user base in the territory. All these discussions highlighted the value creation for multinational digital enterprises based upon the participation of users. The 2019 document on a DST in New Zealand describes the existing

October 2021) and ‘Tax Challenges Arising from Digitalisation of the Economy – Global Base Erosion Model Rules (Pillar Two)’ (OECD, 20 December 2021).

⁷⁵ ‘Tax Challenges Arising from Digitalisation – Report on Pillar One Blueprint’ (OECD, 14 October 2020); ‘Tax Challenges Arising from Digitalisation – Report on Pillar Two Blueprint’ (OECD, 14 October 2020).

⁷⁶ The DST, eg, has been introduced into the UK, Italy, and France. The DPT has been introduced into law in Australia and the United Kingdom.

⁷⁷ *Finance Act 2020* (UK) s 39.

⁷⁸ *Income Tax Assessment Act 1936* (Cth) s 177P.

⁷⁹ ‘Options for taxing the digital economy’ (Inland Revenue Department, June 2019); Digital Services Tax Bill (288 – 1).

⁸⁰ Digital Services Tax Bill, ss 7 to 18.

⁸¹ ‘The World’s Most Valuable Resource Is No Longer Oil, but Data’ (n 23).

⁸² *Action Plan on Base Erosion and Profit Shifting* (OECD Publishing, 2013) 14.

⁸³ *Corporate Tax and the Digital Economy* (HM Treasury, March 2018) 4; European Commission, ‘Commission Proposal for a Council Directive, Laying Down Rules Relating to the Corporate Taxation of a Significant Digital Presence’ (Report, 21 March 2018) <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018PC0147>>.

problem: ‘Digital companies can derive significant value from the active participation of their users, from data generated by the users, and from the network effects. None of this value is recognised by the current profit allocation rules.’⁸⁴

By 2020 when the OECD released their pillar one and two proposals, the basis used to justify taxing rights in the territory of the user had become economic participation of the entity, rather than the user participation.⁸⁵ While this is possibly two sides of the same coin, the focus of each justification is on a different party. User participation grants a taxing right in the jurisdiction of the user, economic participation grants a taxing right in the jurisdiction where the business is operating. The user participation and economic participation principles acknowledge the value creation for an enterprise because of the organisations’ access to the user.

Taxing rights in the user jurisdiction shifts some of the wealth back to the user jurisdiction as tax revenue. This may go some way toward counteracting the shift in wealth from users to collectors of data. New Zealand, as discussed above, is looking at alternative ways to impose a tax on those digital service providers transacting with New Zealand based users in recognition of the value created.

As discussed above, while inequality of wealth is not unusual and not necessarily undesirable, inequality resulting from economic rents may be regarded as unfair. Windfall gains through arbitraging information or other factors does not enhance the economy. Failing to tax economic rents, may be regarded as inequitable. Those who earn a fair income through hard work are subject to income tax and it may seem galling if those who gain their wealth without the requisite effort are escaping a tax liability.

The global digital businesses have grown wealthy because they have developed business models that have attracted users, and the scale of the user base enables a greater competitive advantage. New entrants may also have good innovations but without the scale, they are unable to compete. The scale of the databases gives these global organisations the market advantage which they can exploit.

Therefore, the argument made here is that if data collection is the source of the shift in wealth, an appropriate tax tool will be targeted specifically at that source. One solution may be to consider the introduction of a tax in New Zealand on large multinational technology enterprises on the data they collect from New Zealand based users. The tax base could be bits and bytes of data collected. Tax is paid in money and therefore, although the tax base would be data, a monetary amount would have to be attributed to each unit of data in order to calculate and pay the tax liability.

While this article does not propose a system for taxing data collection, it attempts to highlight the wealth shifts that occur through free transfer of data and proposes the concept that if New Zealand wants to tackle the problem of wealth shifting offshore, it should be creative around designing a tax that best targets the source of that wealth transfer.

V CONCLUSION

The purpose of this article is to examine the role data transfer plays in shifting wealth from New Zealand and to consider how taxation may be used as a tool to counteract some of that

⁸⁴ ‘Options for taxing the digital economy’ (n 79) 5.

⁸⁵ ‘Tax Challenges Arising from Digitalisation – Report on Pillar One Blueprint’ (n 75) 8, 11 and 122.

wealth transfer. The article argues that, because data transfer from New Zealand users to big technology enterprises enables the accumulation of extraordinary wealth, the data transfer should form a tax base. It is argued that, if tax is to be used as a tool to counteract wealth transfer that results from economic rent, it should be carefully targeted at the source of the wealth.

Global technology giants such as Apple, Amazon, Alphabet and TikTok, are now some of the most valuable companies in the world when measured by market capitalisation. There have been significant shifts in wealth toward these companies and their investors. If predictions of further movement toward the fourth industrial revolution come to fruition, these shifts are likely to result in greater transfer of data from New Zealand to offshore corporations. While, at present, most of the big technology enterprises operate in the technology, social media and shopping domains, future big tech enterprises may dominate other industries such as household products, transportation, and medical supplies.

Data is often a free resource for the big tech sector. Firms collect data from social media platforms, use of cookies, personal information in online forms and registrations, among other sources. The use of algorithms sorts the data and provides information that can be exploited for commercial and other purposes. In the future, data may be collected from the movement of goods using RFID tags, and from the movement, behaviour, and bodily functions of humans using data transmitters both on and inside the body. Data holds value and the more an enterprise holds, the more opportunity there is to exploit that data. Holders of large databases gain a competitive advantage over smaller players, creating an environment to amass economic rents. As the use of data grows, potentially the growth in wealth inequality will also grow with those receiving the data being the beneficiaries.

Economic rents shift wealth to the benefactors in excess of their productive contribution. In other words, economic rents arise when the returns on productivity exceed a normal return. They have been labelled exploitative rents.⁸⁶ Given the exploitative or excessive character of these returns, taxing them should be uncontroversial.

While various proposals have been made to deal with the digital economy and profit shifting away from user economies, including New Zealand, they generally seek to find ways to tax revenues and profits. This article proposes that, as the source of wealth for many of these global enterprises is in the volume of data collected, taxing the source of the wealth transfer should be explored. That is, the raw transfer of bits and bytes from New Zealand users to global enterprises could be an appropriate tax base to reallocate some of the wealth transfer back to the New Zealand tax revenue pool.

This article does not examine how its proposals might work on an operational basis. Such operational considerations would be a suitable subject for future research.

⁸⁶ See Stiglitz (n 4).

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