OXFORD ECONOMICS AUSTRALIA

CONSUMER SURPLUS OF THE AUSTRALIAN TECH SECTOR

2025 UPDATE

REPORT FOR THE DIGITAL INDUSTRY GROUP (DIGI)

DiGi

ABOUT OXFORD ECONOMICS AUSTRALIA

Oxford Economics Australia is a leading economic advisory firm. Following the acquisition of BIS Shrapnel in 2017, Oxford Economics Australia have unparalleled capabilities in helping clients to navigate local economic issues in the context of the global trends shaping the world economy.

Oxford Economics, the parent company, was founded in 1981 as a commercial venture with Oxford University's business college to provide economic forecasting and modelling to UK companies and financial institutions expanding abroad. Since then, we have become one of the world's foremost independent global advisory firms, providing reports, forecasts and analytical tools on more than 200 countries, 100 industries, and 8,000 cities and regions. Our best-in-class global economic and industry models and analytical tools give us an unparalleled ability to forecast external market trends and assess their economic, social and business impact.

Headquartered in Oxford, England, with regional centres in New York, London, Frankfurt, and Singapore, Oxford Economics has offices across the globe in Belfast, Boston, Cape Town, Chicago, Dubai, Dublin, Hong Kong, Los Angeles, Mexico City, Milan, Paris, Philadelphia, Stockholm, Sydney, Tokyo, and Toronto. We employ 450 staff, including more than 300 professional economists, industry experts, and business editors—one of the largest teams of macroeconomists and thought leadership specialists. Our global team is highly skilled in a full range of research techniques and thought leadership capabilities from econometric modelling, scenario framing, and economic impact analysis to market surveys, case studies, expert panels, and web analytics.

Oxford Economics is a key adviser to corporate, financial and government decision-makers and thought leaders. Our worldwide client base now comprises over 2,000 international organisations, including leading multinational companies and financial institutions; key government bodies and trade associations; and top universities, consultancies, and think tanks.

MAY 2025

The modelling and results presented here are based on information provided by third parties, upon which Oxford Economics Australia has relied in producing its report and forecasts in good faith. Any subsequent revision or update of those data will affect the assessments and projections shown.

To discuss the report further please contact:

Michael Brennan: mbrennan@oxfordeconomics.com

Oxford Economics Australia

Level 6, 95 Pitt Street, Sydney, 2000, NSW, Australia

FOREWORD

Let's confront the complexity to build Australia's digital future with care and courage

Sunita Bose, Managing Director, DIGI

A safe, inclusive, and forward-looking technology sector benefits every Australian. As this report by Oxford Economics shows, Australia's digital sector is not only driving innovation, it's creating tangible value to households and supporting our long-term economic resilience.

The modelling in this report finds that free and low-cost digital services delivered by the tech sector resulted in an estimated annual consumer surplus of $81.93b in 2025, or $7,836 per household per year. If that sounds intangible, think of the time and money we save every day by using digital products that boost our productivity, enable us to communicate, and access goods, services and information.

That's a direct benefit to Australian families at a time when cost of living pressures are front of mind. We take many of these services for granted, but the digital sector is essential to how people work, connect with each other, and access all kinds of opportunities.

The tech sector plays a pivotal role in boosting productivity, supporting innovation, and expanding opportunity. Our national conversation must now focus on how we continue to grow this contribution responsibly.

Because technology policy isn't just a conversation about economics and innovation; it is also one of safety, ethics, and public trust. Policymakers need to confront the complexity of the 'tech policy tensions' that constantly re-emerge in so many policy decisions.

Innovation and future skills

Frontier technologies like artificial intelligence are reshaping the global economy. In Australia, AI is already supporting doctors, improving accessibility for people with disability, and enhancing disaster response. These technologies will define Australia's future competitiveness and opportunity, but only if we prepare our workforce and education systems for the skills of tomorrow.

Safety and privacy

Digital policy must continue to prioritise safety, particularly for children, while respecting the importance of privacy. These values are not mutually exclusive. With thoughtful design and collaboration, we can develop build safety tools that preserve privacy and empower consumers with more control over their data. Striking this balance is essential to maintaining public trust.

Free expression and public order

Australians value open discourse, and our legal system protects freedom of political communication. But harmful content, including mis- and disinformation, hate speech, and incitement to violence, poses serious risks. Overreach, on the other hand, can suppress legitimate voices and deepen division. These are complex challenges that demand ongoing dialogue and careful policymaking.

Confronting the complexity

There are no simple answers in digital policy, but there are smart, collaborative paths forward. We must be willing to engage with the tensions at the heart of the digital age. Confronting the complexity head on will help build technology that protects rights, manages risks, and enables innovation. And it means industry, government and community, working together to build a digital future that delivers for all Australians.

Sunita Bose
Managing Director
Digital Industry Group Inc. (DIGI)

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Australia's digital sector plays an increasingly vital role in the national economy, supporting growth, productivity, and innovation while delivering benefits to consumers. Many of these benefits come from free or low-cost digital services such as search engines, social networking tools, email, entertainment and education platforms, and mobility applications. These services provide significant value to households without involving direct market transactions, meaning their full economic contribution is not captured by traditional measures such as GDP. This value can be measured through the concept of consumer surplus, the difference between what users are willing to pay and what they actually pay. This report presents updated estimates of the consumer surplus generated by free and low-cost digital services in Australia, reflecting changes in technology use and consumer behaviour since 2019.

Digital engagement and uptake in Australia surged during COVID-19. Average monthly downloads more than doubled between 2019 and 2023, NBN connections grew from under 9 million to over 13 million, and the use of e-commerce and digital banking tools has become more widespread. In addition, digital platforms have delivered increasing value to consumers through continuous improvements, expanded features, and new products and services. From more accessible social and communication tools to faster, more convenient e-commerce and fintech solutions, platforms have enhanced everyday experience, offering personalised search, expanded entertainment options, smarter navigation, and broader access to healthcare.

A three-phase methodology was utilised to update the consumer surplus estimates, combining updated behavioural data, recent international literature and macroeconomic variables to reflect Australian-specific conditions. The updated figures provide a robust and policy-relevant measure of how digital services have continued to contribute to household wellbeing and economic resilience.

Total consumer surplus in 2025 is estimated at $81.9 billion AUD, equivalent to $7,836 per Australian household. This represents a significant increase from $44.2 billion in 2019, driven by new and improved digital products and features, rising living costs that boosted the relative value of low-cost digital services, population growth, and increased digital adoption during the pandemic.

These findings highlight that digital services continue to deliver substantial benefits to consumers, particularly amid economic pressures. This reflects the cost-of-living relief it provides, as households gain access to valuable digital services, such as communication, networking, entertainment, education, banking, and navigation, often at little or no cost.

Michael Brennan
Head of Economic Impact
Oxford Economics Australia

1. INTRODUCTION

Australia's digital sector plays a critical role in driving economic growth, productivity, and innovation. In addition to its direct contributions to GDP and employment, it delivers substantial consumer benefits through low-cost or free digital services such as search engines, email, maps, and video platforms. These services provide significant value to households without involving direct market transactions, meaning their full economic contribution is not captured by traditional measures such as GDP.

A more comprehensive way to account for this value is through the concept of consumer surplus (CS), defined as the gap between what consumers are willing to pay for a service and what they actually pay. In recent years, CS-based approaches have been used internationally to estimate the economic value of digital services. By adopting a CS-based approach, insights into the welfare gains from digital technologies can be derived and contextualised to current economic conditions facing consumers. CS modelling can serve to highlight how tech services reduce effective prices, save time, and improve convenience across a range of everyday activities.

Previous work by AlphaBeta and DIGI[1] in 2019 estimated the CS from digital services at $44.2 billion. Our analysis revisits this estimate for the year 2025. Between 2019 and 2025, four key factors have been account for which contributed to higher consumer surplus across the sector:

- **Population growth:** a larger population increases the number of users accessing digital goods and services, expanding the aggregate consumer surplus as more people benefit from technologies.
- **Increased digital uptake:** increased digital uptake, accelerated by the pandemic, expanded access and utility, boosting consumer surplus as more users gained high-value services at low or zero cost.
- **Inflation:** as general price levels rise, many digital goods and services have remained low-cost or free, increasing the relative consumer surplus value.
- **Increased value or quality derived from digital goods and services:** enhanced features, greater product choice, UX, and integrated ecosystems, boost user utility and value derived.

[1] AlphaBeta. (2019). Australia's digital opportunity. Digital Industry Group Inc. (DIGI). https://digi.org.au/wp-content/uploads/2019/09/Australias-Digital-Opportunity.pdf

2. KEY TRENDS IN DIGITAL USAGE

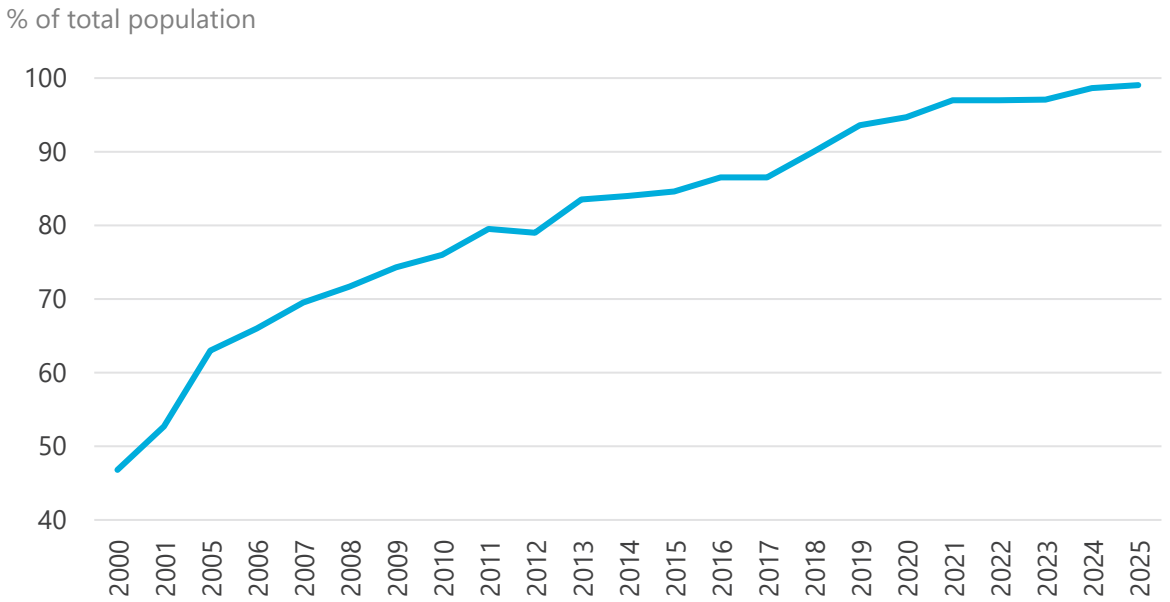
Australia's digital infrastructure and adoption have undergone a rapid transformation in recent years, reshaping how consumers engage with the economy and access essential services. This shift was significantly accelerated by the COVID-19 pandemic, driving greater engagement with digital tools for communication, shopping, entertainment, and service delivery. As a result, internet usage, data consumption, and online retail surged, while investments in broadband infrastructure laid the foundation for sustained digital engagement and rising consumer value.

2.1 GROWTH IN DIGITAL ADOPTION AND INFRASTRUCTURE

The COVID-19 pandemic marked a turning point in Australia's digital landscape, accelerating the update of digital services across households and businesses. Lockdowns and public health restrictions led to a shift toward remote work, online commerce, video streaming and virtual service delivery. These changes drove a significant increase in demand for digital infrastructure and data. Figure 1 below shows that the proportion of Australians using the internet has continued its long-term upward trend and is approaching saturation as of 2025. Between 2019 and 2024, the share of Australians using the internet increased from 93.6% to approximately 97.1%.

Figure 1

Growth of internet users in Australia



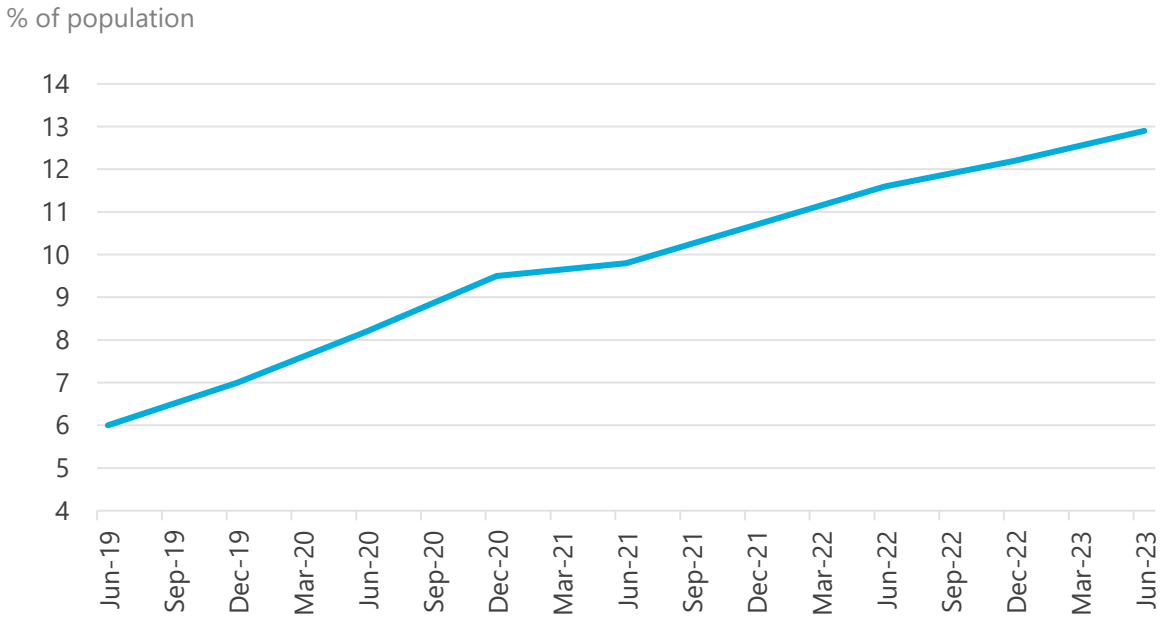
Source: World Bank, Oxford Economics analysis. Reflects percentage of population that has used the internet at least once in the past 3 months, via any device or location. This includes all age groups.

Figure 2, meanwhile, shows that total data downloads more than doubled between mid-2019 and mid-2023, highlighting the surge in digital engagement during COVID and the ongoing demand for high-bandwidth applications such as streaming and video conferencing. This expansion in digital

activity underpins a significant component of consumer surplus gains attributable to the tech sector in recent years.

Figure 2

Total Volume of Data Downloaded in Australia (Quarterly downloads, million TB)



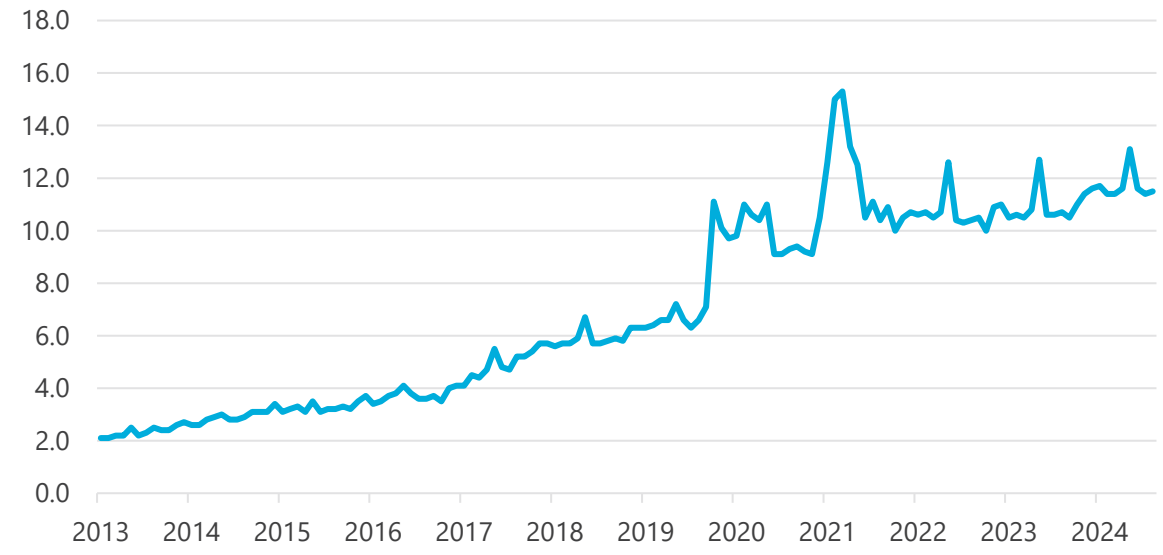
Source: ACMA – How we use the internet. Note that this includes streaming, gaming, video calls, browsing and cloud storage.

As shown in Figure 3, online retail sales also experienced rapid growth through the pandemic, more than doubling from pre-COVID levels. While online sales peaked as a share of total retail in 2021 (15.3%), the dollar value of online spending has continued to rise, with total online spending increasing at a compounded annual growth rate (CAGR) of approximately 20% since 2014. Meanwhile, as seen in Figure 4, NBN connections in Australia have grown from 10 million to 12.5 million, with ongoing upgrades from fibre-to-the-node (FTTN) to fibre-to-the-premises (FTTP) improving network speed and reliability for consumers.

Figure 3

Online Contribution to Total Retail Spending

% of Australian retail sales from online channels

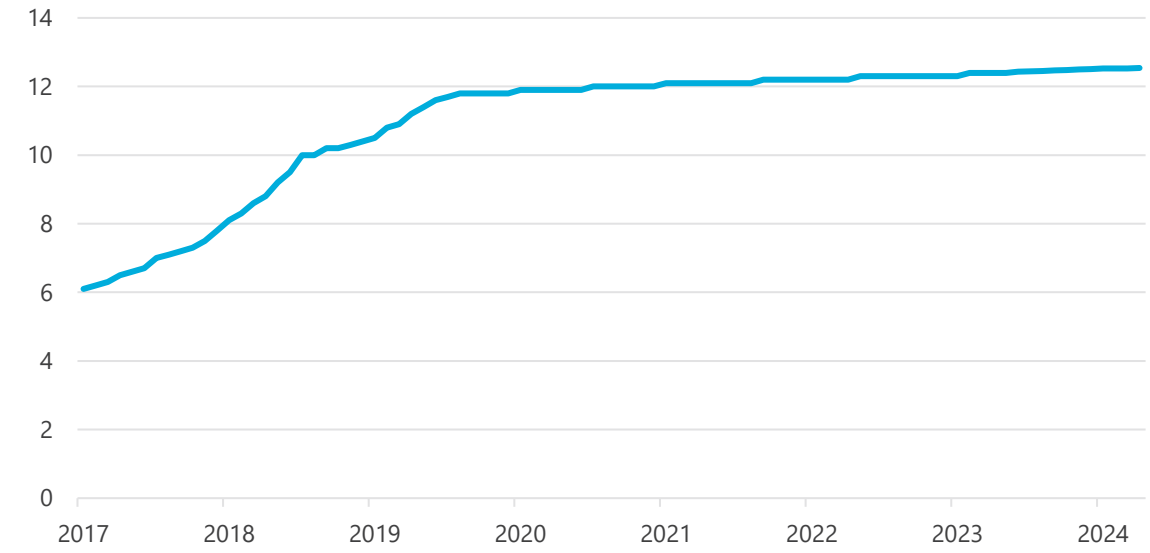


Source: ABS: Retail Trade, Australia, February 2025

Figure 4

Connections to the NBN

Number of homes and businesses connected to NBN, millions



Source: NBN - Monthly Progress Reports 2017-2025

2.2 SHIFTS IN DIGITAL USAGE AND VALUE OF KEY TECHNOLOGIES

The rapid uptake of digital technologies has not only expanded access but also transformed the way Australians communicate, shop, learn, and access services. Digital platforms have delivered increasing value to consumers through continuous improvements, expanded features, and new products and services. From more accessible social and communication tools to faster, more convenient e-commerce and fintech solutions, platforms have enhanced everyday experience, offering personalised search, expanded entertainment options, smarter navigation, and broader access to healthcare. The table below summarises key shifts in digital usage and impacts on consumers.

Category	Key Developments
Social networking tools	• Social and communication platforms have become more feature-rich while remaining free, increasing the value consumers receive. • Short-form video has become increasingly prevalent across a range of platforms • Time spent using messaging, video calls and group platforms* has grown, indicating an increase in utility. • Platform design has improved accessibility, broadening access to digital communication.
Online shopping & convenience	• Online platforms are now central to how consumers access groceries and retail goods. • E-commerce platforms have become more efficient, improving delivery speed, product range and return options • Online food delivery systems have extended their geographic scope, improving access for users outside metropolitan areas • A wider range of goods is available for home delivery, increasing the convenience of platforms for everyday and occasional purchases.
Online entertainment and learning	• Increased uptake of podcasts, streaming and online video • Platforms are increasingly combining educational and entertainment content, offering engaging formats like podcasts, explainer videos, and edutainment series that make learning more accessible.
Search engines	• Enhanced personalisation, voice and in-app integration, and more relevant, localised results making it easier for Australians to find information quickly and efficiently
Email	• Improved security, smarter inbox organisation, and better integration with other digital services
Banking	• Tools and apps have become more consumer-friendly, offering intuitive interfaces, faster transactions, enhancing convenience.
Travel & mobility	• Navigation platforms incorporate a host of new features, including live traffic, weather updates, fuel prices and parking availability. • Real-time public transport data allows users to make more informed and efficient travel choices, and further enabling multimodal trip planning.
e-Health	• Telehealth has moved from a niche service to a mainstream healthcare option, providing low-cost access from home, especially in regional areas, and streamlining patient experience through features like online booking, reminders, and digital records.

** Includes digital services that facilitate communication and interaction among multiple users at once (e.g. group messaging apps, collaboration platforms, group video calling tools and social media groups)*

3. METHODOLOGY

Our methodology quantifies the value Australians derive from digital services using a robust three-phase consumer surplus framework. We focused on technology goods and services that are well-suited to consumer surplus analysis. These included typically free or low-cost digital offerings such as search engines, social media, apps, marketplaces, and productivity tools. These services deliver significant utility to users but are not fully captured in GDP, making them ideal for assessing the gap between value received and price paid.

The analysis followed a three-step approach to estimate the consumer surplus from digital services in Australia as shown by the figure below. First, the scope and methodology were defined by selecting service categories (e.g. search, social media, streaming, e-commerce) and applying willingness-to-accept/pay survey techniques under a benefits transfer framework. Willingness to pay and willingness to accept values for a range of digital platforms and goods and services were sourced from Brynjolfsson et al. (2023)[2], Coyle and Nguyen (2020)[3] and Xie et al. (2022)[4].

Next, data from sources such as ABS[5], ACMA[6,7], the OECD[8] and the World Bank[9,10,11,12] were collected and analysed, incorporating population and inflation trends. Updated estimates were then generated using a benefits transfer method, adjusted for changes in population, digital adoption, and service quality, with scenario testing used to assess sensitivity. Finally, findings were validated against a 2019 baseline and communicated to highlight the contribution of digital services to consumer wellbeing and economic resilience.

[2] Brynjolfsson, E., Collis, A., Liaqat, A., Kutzman, D., Garro, H., Deisenroth, D., Wernerfelt, N., & Lee, J. J. (2023). *The digital welfare of nations: New measures of welfare gains and inequality* (NBER Working Paper No. 31670). National Bureau of Economic Research. https://www.nber.org/papers/w31670

[3] Coyle, D., & Nguyen, D. (2020). *Free goods and economic welfare* (ESCoE Discussion Paper No. 2020-18). Economic Statistics Centre of Excellence. https://www.escoe.ac.uk/publications/free-goods-and-economic-welfare-escoe-dp-2020-18/

[4] Xie, Z., Chen, J., & Or, C. K. (2022). Consumers' Willingness to Pay for eHealth and Its Influencing Factors: Systematic Review and Meta-analysis. Journal of Medical Internet Research, 24(9), e25959. https://doi.org/10.2196/25959

[5] Australian Bureau of Statistics. (n.d.). *Population*. https://www.abs.gov.au/statistics/people/population

[6] Australian Communications and Media Authority. (2024). *Communications and media in Australia: How we watch and listen to content*. https://www.acma.gov.au/publications/2024-12/report/communications-and-media-australia-how-we-watch-and-listen-content

[7] Australian Communications and Media Authority. (2024). *Communications and media in Australia: How we access news*. https://www.acma.gov.au/publications/2024-02/report/communications-and-media-australia-how-we-access-news

[8] Organisation for Economic Co-operation and Development (OECD). (n.d.). *Purchasing power parities (PPP)*. https://www.oecd.org/en/data/indicators/purchasing-power-parities-ppp.html

[9] World Bank. (n.d.). *Individuals using the Internet (% of population)* [Data set]. World Bank Open Data. https://data.worldbank.org/indicator/IT.NET.USER.ZS

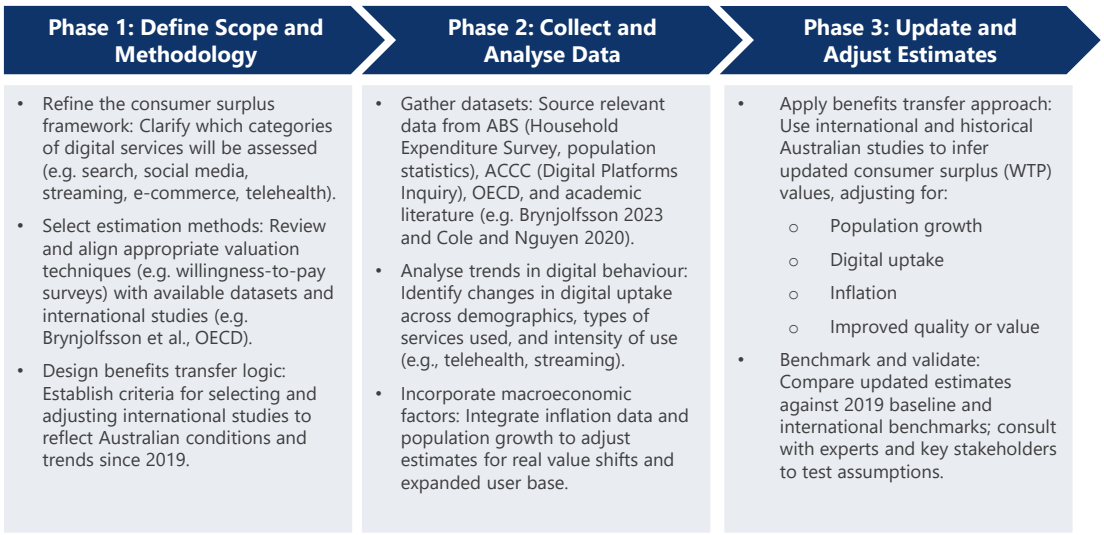
[10] World Bank. (n.d.). *GDP per capita (current US$)* [Data set]. World Bank Open Data. https://data.worldbank.org/indicator/NY.GDP.PCAP.CD

[11] World Bank. (n.d.). *Population, total* [Data set]. World Bank Open Data. https://data.worldbank.org/indicator/SP.POP.TOTL

[12] World Bank. (n.d.). *GDP (current US$)* [Data set]. World Bank Open Data. https://data.worldbank.org/indicator/NY.GDP.MKTP.CD

Figure 5

Methodology



Source: Oxford Economics

In conducting this analysis, we necessarily faced several analytical limitations. Due to time constraints, the study relied on publicly available datasets and heavily referenced existing academic literature. In particular, two key studies were used to estimate willingness-to-accept (WTA) values for free and low-cost digital goods; however, both were limited to adult respondents. In addition, our analysis may also not capture the full extent of benefits given the following limitations:

- Our consumer surplus estimates do not capture the full value of recent advances in AI applications, due to limited international literature providing specific valuation parameters for these emerging features and products.
- The analysis excludes individuals under 18 years of age, meaning benefits from digital services used by children and adolescents, such as educational apps or entertainment platforms, are not reflected.
- Certain products and services, such as health-related wearables and AR/VR devices, were omitted from the scope due to data limitations and the heterogeneity of device types, prices, and use cases.

4. RESULTS

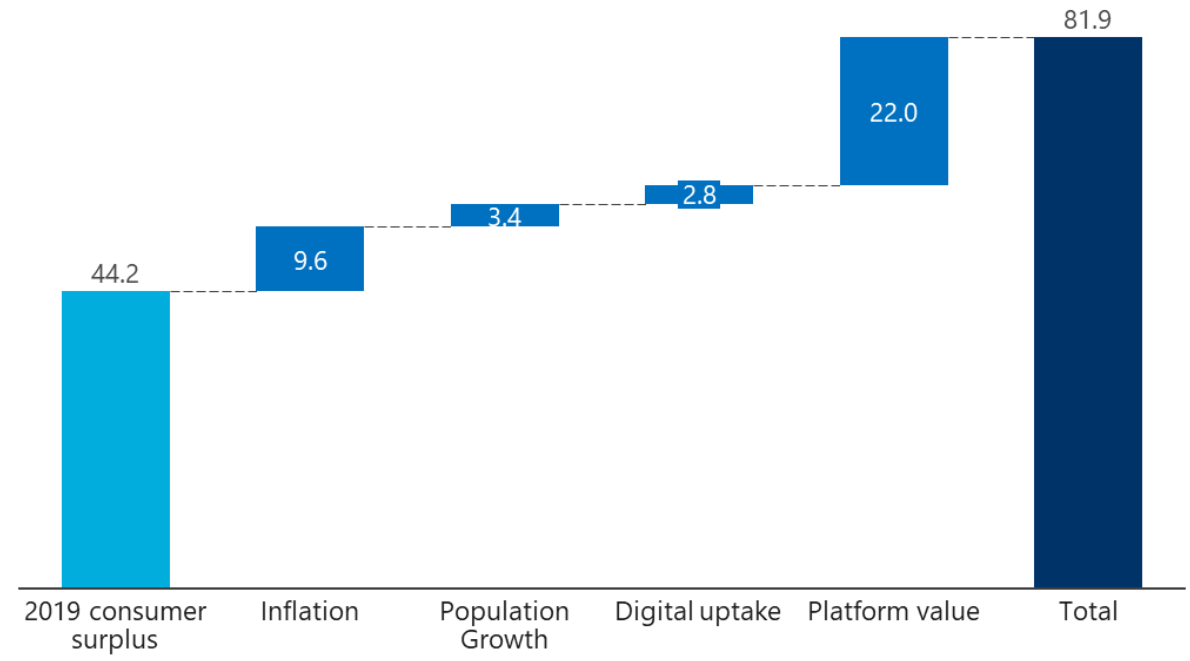
We find that the estimated annual consumer surplus in 2025 resulting from the tech sector was $81.93bn, or $7,836 per household per year. Figure 6 below displays an indicative decomposition of the increase in consumer surplus between 2019 and 2025.

The increase in consumer surplus from 2019 to 2025 is driven by four key factors. The largest driver of growth in consumer surplus was the improvement in platform value ($22 billion), fuelled by new products, enhanced features, and better user experiences that significantly increased the utility consumers derive from digital services. Inflation accounts for a $9.6 billion uplift, representing the largest single driver outside platform value. Population growth adds a further $3.4 billion, while increased digital uptake contributes $2.8 billion.

Figure 6

Consumer surplus of the tech sector

$ billion AUD (2025)



Source: Oxford Economics

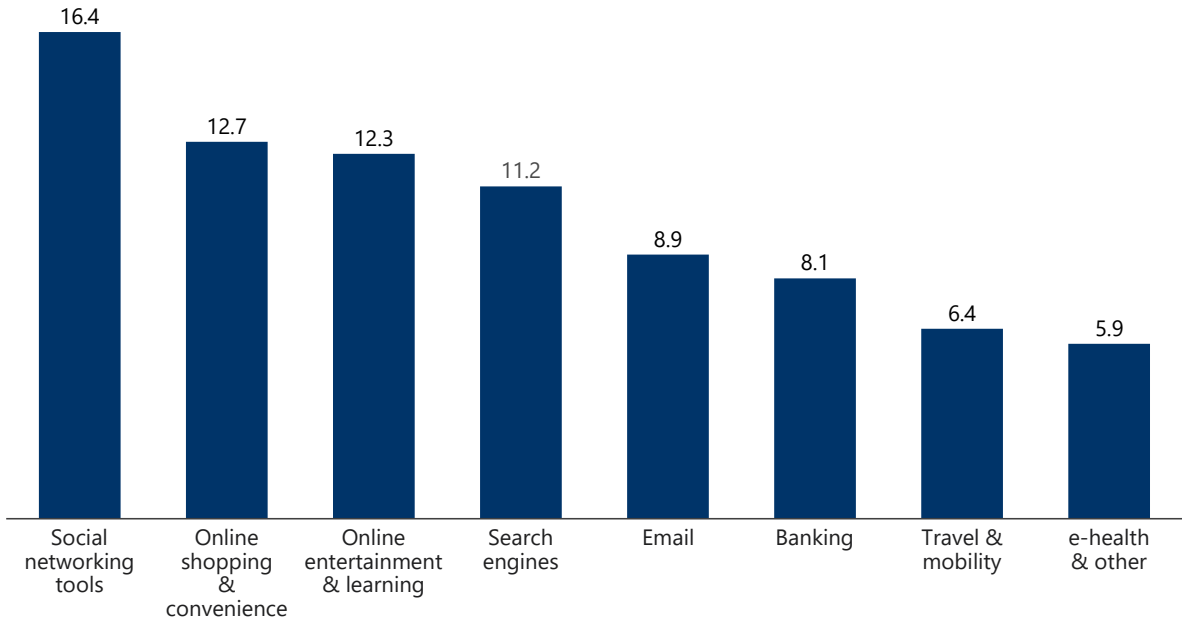
The figure below provides a breakdown of consumer surplus in Australia's tech sector in 2025 by category, highlighting where consumers derive the greatest value from digital services:

- **Social Networking Tools ($16.4 billion)**: These platforms continue to deliver substantial value through widespread use and strong perceived utility, offering free access to communication, content sharing, and social connection. They also enable users to engage with communities in real time through user-friendly, often free platforms.
- **Online Shopping and Convenience ($12.7 billion):** Digital platforms in this category have reshaped consumer habits by improving access, choice, and convenience, particularly through e-commerce, food delivery, and related services. Consumers benefit from fast access to a wide range of products and meals, saving time and expanding choice from the home.
- **Online Entertainment and Learning ($12.3 billion):** Streaming platforms and digital education services have made entertainment and learning more accessible and flexible, contributing significantly to consumer surplus. This includes both free and paid video streaming, music services, online news and education platforms.
- **Search Engines ($11.2 billion):** The ability of search engines to help users find information quickly and efficiently remains essential, underpinning a major share of value across digital activities.
- **Email ($8.9 billion):** As a foundational communication tool, email services continue to offer consistent utility in personal and professional settings, supporting task management and access to a wide range of online services.
- **Banking ($8.1 billion):** Online and app-based banking platforms support everyday financial management and transactions, contributing meaningfully to consumer value. They offer secure, anytime access with features such as fund transfers and payment services.
- **Travel and Mobility Platforms ($6.4 billion):** Services such as Google Maps and Uber provide benefits through improved travel planning, time savings, and enhanced access to transport. Consumers benefit from real-time navigation, traffic updates and route planning.
- **E-Health and Other Services ($5.9 billion):** Although smaller in absolute terms, this category reflects a growing area of value as telehealth and digital health services become more integrated into mainstream care. These include tools for online appointment booking, virtual consultations, and access to digital medical records.

Figure 7

Consumer surplus of the tech sector by category

$ billion AUD, 2025



Source: Oxford Economics analysis

The distribution of consumer surplus highlights how embedded digital tools are in Australians' daily lives. The largest surpluses come from platforms that are not only widely used but also frequently free or low-cost. The results suggest that improvements in user experience, integration, and accessibility have increased the utility consumers derive from these services, contributing meaningfully to cost-of-living relief and lifestyle.

The data also implies that investments in digital infrastructure and innovation, particularly those that enhance accessibility and affordability, can yield significant public value, even when not directly measured in GDP.

OXFORD ECONOMICS
AUSTRALIA

Sydney
Level 6
95 Pitt Street
Sydney
NSW 2000
Tel: +61 (0)2 8458 4200

Melbourne
Level 22
120 Spencer Street
Melbourne
VIC 3000

Global Headquarters
Oxford Economics Ltd
Abbey House
121 St Aldates
Oxford, OX1 1HB
Tel: +44 1865 268 900

London
Tel: +44 (0)20 7803 1400

Belfast
Tel: +44 (0)2982 635400

Frankfurt
Tel: +49 69 95 925 280

Paris
Tel: +033 (0)1 78 91 50 52

Milan
Tel: +39 02 9406 1054

Paarl
Tel: +27 (0)21 863-6200

New York
Tel: +1(646) 786 1879

Philadelphia
Tel: +1 (610) 995 9600

Boston
Tel: +1 (617) 206 6112

Chicago
Tel: +1 (847) 993-3140

Los Angeles
Tel: +1 (424) 303 3449

Florida
Tel: +1 (954) 916 5373

Toronto
Tel: +1 (905) 361 6573

Mexico City
Tel: +52 155 5419-4173

Singapore
Tel: +65 6850 0110

Hong Kong
Tel: +852 3974 8842

Tokyo
Tel: +81-(0)3-4588-2798

Dubai
Tel: +971 56 396 7998

Email:
info@oxfordeconomics.com

Website:
www.oxfordeconomics.com.au