Picking up the pace: Trends in small business technology adoption and use

December 2021
Executive summary

This report looks at the digitalisation of small businesses that use Xero. Digitalisation is the extent to which businesses leverage technology to support and streamline their operations.

Small business digitalisation has been boosted by the COVID-19 pandemic. Although small businesses are slower to adopt emerging technologies than large businesses, the COVID-19 crisis has increased information and communication technology (ICT) expenditure. Compared to pre-pandemic levels, ICT expenditure is up 13% in Australia, 25% in New Zealand, and 20% in the United Kingdom following a period of prolonged stability.

Small businesses are engaging with technology differently based on their country, industry, and firm size.

- **Country**: Small businesses in the United Kingdom are more digitalised than those in Australia and New Zealand, both in terms of ICT expenditure and app usage.
- **Industry**: Small businesses in the professional services industry spend the most on ICT across all three countries. App usage also varies by industry, with small businesses in hospitality and manufacturing industries interacting with apps the most.
- **Firm size**: As small businesses grow (as measured by employee numbers) and their operations scale up, they continue to spend on ICT, and their app interactions tend to intensify. Australian small businesses tend to wait later in their employee growth lifecycle before engaging with apps frequently (>40 times per month).

Digitally enabled small businesses were significantly more resilient throughout the COVID-19 crisis, and outperformed their peers in most performance metrics. Across all three countries, small businesses that had higher levels of ICT spend relative to their total spend on all expenses experienced greater sales and fewer job losses throughout the pandemic:

- **Australia**: Australian small businesses in the top quartile (25%) of ICT expenditure saw $34,800 AUD more in sales throughout 2020 (relative to 2019) than firms that spent the least. This value was $44,400 NZD in New Zealand, and £32,400 GBP in the United Kingdom.
- **New Zealand**: The top 25% of ICT spenders in Australia and New Zealand also saw net gains in jobs throughout 2020, while firms in the bottom 25% saw slight declines. In the United Kingdom, the top 25% of ICT spenders saw just one-third of the job losses compared to firms in the bottom 25%.
- **United Kingdom**: Firms that interacted the most with apps were more productive than their counterparts in 2020. In Australia and New Zealand, app-using firms that were in the bottom quartile for monthly interactions did not observe a large productivity uplift over non-app users. In the United Kingdom, both the top quartile and bottom quartile of app users saw significant productivity uplifts over non-users.

---

1 Source: Spiceworks (2019), The 2019 state of IT
COVID-19 has increased small business technology adoption and usage

As we show in our study, the COVID-19 pandemic caused many small businesses around the world to embrace digitalisation. Prior to the pandemic, spending on digital services such as software and internet access had increased markedly, and was up 120% since 2009 in New Zealand, 70% in Australia, and 60% in the United Kingdom.²

² Source: National Account Data, Gross Fixed Capital Formation - Software; ABS, Stats NZ, ONS; Accenture analysis
The pandemic resulted in several changes to how businesses continued to operate while limiting the spread of COVID-19 and keeping communities safe. Many small businesses had to rapidly find a way to operate online. This report uses two metrics from the Xero small business subscriber base to measure digitalisation:

- **ICT expenditure** is measured by analysing the proportion of expenses that small businesses spend on ICT-related purchases.³

- **App usage** (also referred to as engagement/interactions) is measured as the total number of unique daily interactions that a firm has with apps attached to their Xero account each month. An interaction could include logging into the app, to uploading invoices or managing their payroll.⁴ Interactions may be manually triggered by a user or automatically triggered by the app itself. Previous Xero reports looked at the number of apps registered to a business’s account, but this report is the first to incorporate the intensity of app usage.

Pre-pandemic insights reveal that Xero subscribers in the United Kingdom were more digitalised than their Australian and New Zealand counterparts. On average in 2019, small businesses in the United Kingdom spent 3.4% of their total expenses on ICT, compared to 2.1% and 2.3% respectively in Australia and New Zealand.

Looking to the current state of small business digitalisation, businesses in the United Kingdom remain the leaders in technology adoption and spending. In the first half of 2021, the average Xero-subscribing business in the United Kingdom spent 4.4% of their total expenses on ICT, while Australia and New Zealand firms spent 2.4% and 2.9% respectively.⁵

---

³ For further detail on matching methods, see the appendix and table A.1.
⁴ For further details on how the app usage metric is measured, see the appendix.
⁵ As this current state analysis looks at the first six months of 2021, it captures a period where the United Kingdom had increased public health measures in place to limit the spread of COVID-19. This may mean that overall expenses were decreased at this time. If this was the case, it nonetheless demonstrates that ICT expenses did not fall in lockstep with overall expenses.
Comparing pre-pandemic ICT expenditure to current levels, we see that the COVID-19 pandemic has sparked a rapid acceleration in ICT expenditure (Figure 1). In Australia and New Zealand where small business conditions had largely recovered in the first half of 2021, we observed a 13% and 25% uplift in expenditure respectively. The United Kingdom recorded a 20% uplift, but figures may be slightly inflated due to reduced overall expenditure during the early 2021 lockdowns.

Industry-level insights reveal a divergence between industries that are highly digitalised, and those that are less digitalised. Across all three countries the professional services industry recorded the highest levels of ICT expenditure, while businesses in industries such as hospitality and construction tended to spend less on ICT. For example, United Kingdom professional services firms spent around 6% of their total expenses in ICT in 2019, whereas businesses in hospitality and construction spent approximately 1.5% to 2% of their total expenses.

* For example, Xero’s The Job Ahead: Small Businesses and the Global Economic Recovery.
Small business technology adoption and use: the current state of play

Small business digitalisation depends on the country, industry of operation, and even the size of the business. This section investigates the current state of play for small businesses and reveals pockets of high and low digitalisation around the world.

In the first half of 2021, Australia and New Zealand were largely within a recovery period from COVID-19 and were seeing pre-pandemic levels of small business performance as indicated by Xero’s Small Business Index. In contrast, the United Kingdom was only beginning to recover from its winter 2020/21 lockdowns.

Source: Xero Small Business Index
Small businesses in the United Kingdom are leading digital adoption and ICT expenditure

Compared to their counterparts in Australia and New Zealand, Xero’s small business customers in the United Kingdom spent a greater proportion on ICT and used apps more frequently. In the first half of 2021, small businesses in the United Kingdom spent 4.4% of their expenses in ICT, compared to 2.9% in New Zealand and 2.4% in Australia (Figure 2). This continues pre-pandemic trends observed in Figure 1, suggesting that the United Kingdom’s historical leadership in this metric was resilient to the impacts of the COVID-19 pandemic.
As shown in Figure 3, app-using small businesses in the United Kingdom tend to interact with apps more intensely, with 30% of app-using firms recording over 40 interactions in an average month, compared to 17% in Australia and 11% in New Zealand. On the opposite end of the spectrum, United Kingdom small businesses are also less likely to interact with apps infrequently, with just 9% of firms recording one to ten interactions per month, less than half of Australia and New Zealand’s engagement.

Overall, this suggests that relative to their Australian and New Zealand counterparts, small businesses in the United Kingdom are:

- more likely to frequently interact with apps (more than 40 times per month)
- less likely to interact with apps infrequently (one to ten times per month)

Apps used to manage bills and expenses were the most popular across all three countries. United Kingdom small businesses were also more likely to engage with practice manager apps than their Australian and New Zealand counterparts. Comparatively, United Kingdom small businesses tend to engage less with apps that are used to manage invoicing and jobs, and time tracking.
Professional services firms spend twice as much on ICT compared to the average small business

As shown in Figure 4, professional services small businesses had the highest average levels of ICT expenditure in all three countries. Across most industries reported, ICT expenditure levels were higher in the United Kingdom than in Australia and New Zealand. This is particularly notable in United Kingdom hospitality firms, that spent 2.6% of their expenses on ICT – however, we note that impacts from the COVID-19 pandemic are likely still influencing overall expenses within these hospitality firms.

Fig 4. Small business ICT expenditure by industry
% share of expenses, average between January 2021 and June 2021

<table>
<thead>
<tr>
<th>Industry</th>
<th>Australia</th>
<th>New Zealand</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional services</td>
<td>4.9%</td>
<td>6.3%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Other services</td>
<td>2.4%</td>
<td>2.7%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Rental, hiring, real estate</td>
<td>2.0%</td>
<td>1.7%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Retail trade</td>
<td>1.9%</td>
<td>2.1%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Construction</td>
<td>1.7%</td>
<td>2.2%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1.6%</td>
<td>2.2%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Hospitality</td>
<td>1.1%</td>
<td>1.6%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

Average: 2.4% in Australia, 2.9% in New Zealand, 4.4% in the United Kingdom

Source: Xero Small Business Insights, Accenture

8 Industries are self-reported by Xero small business subscribers. Xero uses ANZSIC for all markets, including the United Kingdom.
As shown in Figure 5, hospitality firms in the United Kingdom saw a sustained uplift in ICT expenditure, even when restrictions eased in mid-2020. Several industries, such as construction and retail trade had returned to pre-pandemic levels of ICT expenditure by mid-2021, while sustained uplifts were observed in professional services and rental, hiring, and real estate services.

Australian app-using small businesses in hospitality, manufacturing and information, media and telecommunications interacted with apps the most in the first half of 2021. A similar pattern was seen in the United Kingdom, where small businesses in manufacturing interacted with apps the most on average. Small businesses in rental, hiring and real estate interacted the least in both Australia and the United Kingdom.

Source: Xero Small Business Insights, Accenture
Businesses scale up ICT spending and intensify app usage as they grow

As small businesses progress through their lifecycle they continue to spend on ICT to support their growth, and when they are larger they are more likely to use apps frequently. Figure 6 shows the relationship between firm size (number of employees) and ICT expenditure, showing that sole traders and microbusinesses (one to five employees) spend more as a proportion of their expenses than their larger counterparts. When businesses employ more than five people, they continue to spend on ICT as they scale up their operations and non-ICT expenses also increase:

- Sole traders spent 5.1% (Australia), 5.7% (New Zealand), and 5.9% (United Kingdom) of their average monthly expenses on ICT in the first half of 2021.
- Small businesses with one to five employees spent 2.0% (Australia), 1.7% (New Zealand), and 3.6% (United Kingdom) in the first half of 2021.
- Businesses with more than five employees spent 1.2% (Australia), 1.0% (New Zealand), and 2.1% (United Kingdom).

This suggests that non-ICT expenses scale faster than ICT expenses as a non-employing business transitions to employing up to five employees. As the business scales beyond five employees, they continue to spend on ICT, even as their non-ICT expenses also scale.
Fig 6. Small business ICT spend by firm size\(^9\)
\(\%\), share of expenses, average between January 2021 and June 2021

Australia

New Zealand

United Kingdom

Solo traders spend a greater proportion on ICT (5.0\%); possibly due to upfront investment in a new business and because expenditure on other items is lower (e.g. staff wages) compared to larger businesses.

Once businesses employ more than 10 staff, ICT expenses stabilises as a % of total expenses. This means they continue to invest in ICT as their businesses (and expenses) scale.

SMEs in the UK with 10+ employees consistently spend more on ICT than firms in AU and NZ (~2.0\% of expenses).

Source: Xero Small Business Insights, Accenture

\(^9\) Our analysis is limited to Xero subscribers that use the payroll product, and is therefore a subset of the overall ICT expenditure sample. Sole traders are identified based on self-reported information and verified using additional filters (e.g. no employee wages paid by the business).
The effect of employee numbers on app usage intensity is explored in Figure 7, which shows that businesses that interact with apps frequently (>40 times per month) tend to be firms that have higher numbers of employees. Firms that do not interact with apps at all tend to employ approximately five people on average, firms that interact with apps one to 40 times employ around six to eight people on average, while firms that interact with apps frequently (>40 times per month) employ more than nine people.

Figure 7 also demonstrates significant variation between countries, notably between Australia and the United Kingdom:

- Between these two countries, the average employee size of the sample is the same at 6.4 employees each (5.6 employees for New Zealand).
- However, United Kingdom small businesses have one employee fewer on average than Australia when they begin interacting with apps (1 to 40 interactions per month), and around four fewer employees than Australia when they interact with apps more than 40 times per month.
- Australian small businesses have, on average, more employees when they are interacting with apps, relative to firms in the United Kingdom.

<table>
<thead>
<tr>
<th>App Interactions</th>
<th>0</th>
<th>1 to 40</th>
<th>Over 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>4.8</td>
<td>7.6</td>
<td>13</td>
</tr>
<tr>
<td>New Zealand</td>
<td>4.9</td>
<td>6.4</td>
<td>8.6</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>5.4</td>
<td>6.6</td>
<td>9.1</td>
</tr>
</tbody>
</table>

**Fig 7. App usage by firm size**

Average number of employees, by firm’s app-using intensity in H1 2021

*Australian businesses typically have more employees when they start adopting apps than New Zealand and United Kingdom.*

*New Zealand businesses that use apps one to 40 times a month have 6.4 employees on average.*

*United Kingdom businesses that use apps over 40 times a month have 9.1 employees on average.*
15 PICKING UP PACE: TRENDS IN SMALL BUSINESS TECHNOLOGY ADOPTION AND USE

Case study:
Synx, Australia

Using digital tools to solve business problems at scale

Charles McKay is one small business owner who doesn’t need to be convinced of the benefits of adopting digital tools. At last count, his business, Synx, had more than 20 connected apps.

A highly digitally enabled sales and marketing agency based in Australia, Synx’s business philosophy is simple: people, platform, process.

“We enable people with the platform, and automate as much of the process as possible,” Charles says.

Focusing on automating the front office for their business clients, including marketing, sales, customer service and content management, Charles, his team, and partners are no strangers to the benefits of apps.
“When I founded Synx in 2014, I knew we wanted cloud accounting, not desktop accounting, and then every app I connected from there had to integrate with Xero. I also partnered with Hubspot really early on because our business values are closely aligned – we both put the customer, not the platform, at the centre of the universe.”

Charles says the biggest benefit of connecting such a wide range of apps is that they solve business problems at scale.

“A problem will come up, and rather than throwing a person at a problem, I look at how we can use an app. I’d prefer to scale the platform and the process rather than increase our staff headcount for mundane tasks – I’d rather my people focused on much higher value and more impactful work.”

Apps such as Slack, Qwilr, Databox, Cradle, and Zapier help with everything from web analysis to video, to instant messaging, to quoting. One point of data entry is the goal.

“I made a costly mistake in the first few months of my business which taught me about the importance of single data entry – I failed to bill for hours and equipment totalling $30K. I learned that wherever there’s a spreadsheet involved, there is human error. If the data going into the app is incorrect, there is going to be a problem.”

When the COVID-19 pandemic really took hold at the start of 2020, for Synx, it was business as usual despite a change in location.

“I’d moved from Melbourne to the hinterland in Byron Bay and was a bit nervous about clients wanting to see me in person regularly. COVID-19 hit and then using Zoom became the new normal. We’d already been using Zoom for five years so from an operational perspective, nothing changed.

“From a client perspective, we received a lot of feedback that they felt really well prepared in this more digital environment – even a timber flooring installer got in touch to say he was fully equipped, which was great.”
3.0

Businesses benefit significantly from technology adoption and use

Highly digitalised small businesses outperformed their peers in most metrics throughout 2020, indicating that digital adoption improves the resilience of small businesses in times of economic uncertainty.
Firms were assigned a quartile based on their 2019 ICT expenditure levels and average monthly app interactions in 2019:

- Quartiles were assigned independently for ICT expenditure and app interactions, so that firms each have two distinct digitalisation quartiles.

- Quartiles were assigned within groups of country, industry, and employee numbers to account for underlying differences across these characteristics. This means that all four quartiles contain a near-identical business population and we avoid, for example, professional services firms – which spent almost twice the amount on ICT than their counterparts in other industries – being overrepresented in the top quartile.

Effectively, the bottom quartile contains the least digitalised 25% of small businesses. Three Xero Small Business Insights (XSBI) metrics are used to provide a comprehensive picture of small business health and performance:

- Sales – This metric measures the total value of invoices issued by a business in each calendar month.
- Jobs – This metric counts the number of unique employees on a business’s payroll in each calendar month.
- Time to be paid – This metric assesses how long businesses are waiting to be paid for their invoices, providing insights on small business cash flow.

Further details are available in the appendix. Where digitalisation is measured according to ICT expenditure and app usage. Further details available in the appendix and Figure A.1.
Businesses that spent more on ICT before COVID-19 outperformed their peers throughout the crisis and beyond

Fig 8. Small business performance by 2019 ICT expenditure
Selected XSBI metrics, average annual change between 2019 and 2020

Source: Xero Small Business Insights, Accenture

Figure 8 compares two groups of firms: the top 25% of firms and the bottom 25% of firms based on 2019 ICT expenditure. The top quartile of firms by ICT expenditure outperformed the bottom quartile significantly in terms of sales and jobs:

- **Sales**: Over the course of the year, the top 25% of firms saw a sales uplift (relative to 2019) of AU$28,800 in Australia, and NZ$20,400 in New Zealand, while in the United Kingdom they saw a modest £1,200 decline in annual sales.

- **Jobs**: Jobs results were largely similar in Australia and New Zealand, with a slight (0.1 – 0.2 employees on average) uplift for ICT high spenders. In the United Kingdom however, ICT high spenders lost just one-third the number of employees (0.2 vs 0.6 jobs).

- **Time to be paid**: The top quartile of ICT spenders were paid 1.9 days faster than the bottom quartile of ICT spenders in Australia, 1.1 days faster in New Zealand, and 1.6 days faster in the United Kingdom. Changes between 2019 and 2020 were broadly similar across all three countries for both groups. New Zealand recorded the most pronounced difference between the two quartiles (0.7 days).
Fig 9. Small business sales growth by 2019 ICT expenditure levels
% sales growth, year-on-year

- **United Kingdom**
  - Top 25% of firms by ICT expenditure:
    - Sales growth from Jan 20 to Oct 20 shows a significant increase, with a peak of +9.1% in Nov 20.
  - The UK was the only country where higher ICT spend increased the resilience of business sales in the peak of the pandemic.

- **Australia and New Zealand**
  - Bottom 25% of firms by ICT expenditure:
    - Shows a more volatile pattern with a peak of +5.0% in Sep 20.
  - Top 25% of firms by ICT expenditure:
    - Demonstrates more resilient sales growth, with a peak of +7.7% in Nov 20.

Source: Xero Small Business Insights, Accenture
Figure 9 and Figure 10 present the time series underlying the sales and jobs figures shown in the dashboard (Figure 8). In Australia and New Zealand, sales were initially similar between the two groups of firms; however they diverged following the first wave of the crisis in April to June 2020. Following the initial peak of the crisis, sales in the top quartile of firms were consistently five to ten percentage points higher than the bottom quartile. In the United Kingdom, ICT expenditure appeared to have a greater impact while the country was under lockdown restrictions.

Job growth for the top 25% of firms increased by a maximum of around 5 percentage points in Australia and New Zealand, and 15 percentage points in the United Kingdom. In particular, the top quartile of firms continued to see resilient jobs growth in December 2020, up seven percentage points compared to the bottom quartile.

Source: Xero Small Business Insights, Accenture
As shown in Figure 11, the top 25% of ICT spenders were consistently paid faster than the bottom 25% of firms. In 2020, ICT spenders were paid 1.9 days faster in Australia, 1.1 days faster in New Zealand, and 1.6 days faster in the United Kingdom. In the United Kingdom, peak payment times in May 2020 were considerably less severe for the top quartile of ICT spenders, that were waiting 37.9 days to be paid, almost four days faster than the bottom quartile of ICT spenders.

Source: Xero Small Business Insights, Accenture
App-using small businesses were generally more resilient and productive throughout the COVID-19 pandemic

App usage was generally indicative of more resilient sales growth and jobs growth across all three countries, as shown in Figure 12:

- The top 25% of app using businesses reported annual sales uplifts (compared to non-users) of 4.4 to 8.7 percentage points, and uplifts in jobs of 0.3 to 4.5 percentage points, depending on country.

- Differences in sales and jobs appear to be more pronounced in New Zealand and the United Kingdom than in Australia.

- However, app usage was found to not have a pronounced impact on a business’s time to be paid. Changes in payment times (relative to 2019) were identical for the two groups in Australia, slightly faster for the top 25% of app users in the United Kingdom, and actually slower for the top 25% of app users in New Zealand.

Figure 12. 2020 small business performance by app usage intensity (relative to 2019 levels)

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th>New Zealand</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non user</td>
<td>Top 25%</td>
<td>Non user</td>
</tr>
<tr>
<td>Sales (% year on year)</td>
<td>-2.2%</td>
<td>+2.2%</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Job (% year on year)</td>
<td>+0.7%</td>
<td>+1.0%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>Time to be paid (change in days)</td>
<td>-2.1</td>
<td>-2.1</td>
<td>+2.0</td>
</tr>
</tbody>
</table>

Table values present changes in each metric between 2019 and 2020 (full calendar years)
Small business productivity was also assessed based on 2019 app usage intensity. Productivity was measured as a small business’s total sales in a calendar month divided by their employee numbers. Across all three countries, the top quartile of app users were more productive than those that did not use apps in 2019. Results for the bottom quartile of app users varied by country:

- In Australia, low-intensity users were slightly less productive than non-users, suggesting minimal productivity uplift from infrequent engagement with apps.
- In New Zealand, the bottom quartile of app users were slightly more productive than non-users, particularly during periods of reduced restrictions.
- In the United Kingdom, the bottom quartile of app users were significantly more productive than non-users. In some months, these firms even matched the productivity results of the top quartile of app-using firms.

The variations above may be explained by differences in app usage intensity across each country.

These results demonstrate the benefits of digitalisation, and the increases in performance that expenditure on ICT and regular app usage can bring to small businesses.
Case Study: Racetorx, United Kingdom

A seamless partnership between small business, accountant and apps

When Racetorx owner, Dale James, engaged a new accounting firm at the start of 2020, he embarked on a path towards becoming a highly digitalised business – a big change from how the business had been set up previously.

Racetorx, which has designed and manufactured quality motorbike parts since 2016, is based out of Dale’s workshop in Peterborough, England. Dale built the business from the ground up – starting with an idea and a passion for motorbikes and progressing to a business with 60 products in its catalogue, and counting.

“I was frustrated at not only the prices of the parts on the market, but also on the quality of design,” says Dale. “It infuriates me to see the poor quality products people are buying for a silly amount of money. We want the quality of our products to be better than any others, and we can still charge a reasonable price.”
Dale chose to engage Moore Thompson at the start of 2020, after realising that his previous setup wasn’t fit for his business purpose. “I didn’t have any connected software, everything was manual and messy. I wanted to know more about what was going on in my business, and I was chasing my accountant for a lot of things. It was too stressful, so I moved to Moore Thompson. Having Xero and Moore Thompson on board means my business runs so much smoother.”

Cloud Accounting Manager at Moore Thompson, Daniel Coleman, recognised quickly that Dale was tech-savvy and would benefit from highly digitalising his business. “We offered him a full app package, which he jumped at because it meant more efficiency and less work for him.”

That package includes Zapier to produce sales invoices in Xero; Link my Books bridging software to record daily Ebay sales; Paypal and Lloyds Bank for payments; Dext and Fetch for invoices and purchases. “We also plug in apps like Chaser, to chase invoice payment, and Futrli, to produce cash flow forecasting for funding, as needed. If we don’t need to use an app regularly, we plug it in and out as needed,” Daniel says.

And working with Daniel’s colleague, Jacob Parkin, Racetorx has also benefitted from extensive research and development off the back of Xero.
More time to focus on innovation, not administration

For Dale, embracing digitalisation has had a huge impact on the day-to-day running of Racetorx. It means he can get back to focusing on innovative products, like the thumb brake kit he’s been developing for the last three years.

“I hate documentation with a passion. My desktop is a mess of PDF files, invoices, design files. I don’t want to worry about admin, I want to focus on design, 3D scanning, social media and packing orders. As soon as I digitally connected my business, everything ran so much more smoothly. It’s not expensive, it saves a lot of time, and it makes so much sense to funnel every aspect of the business through Xero and connected apps.”

And Moore Thompson looks after the bookkeeping function, a task that Daniel says is made easier and less costly due to the apps. It’s a win-win for both the accountant and the small business.

“We act as a virtual finance officer – if we saw significant losses, we would get in touch with him. He can leave it to us and know that we’ll pick anything up if there are any concerns,” says Daniel.
4.0 Conclusion

This report has found that adoption of technology provides clear benefits to small businesses in terms of jobs, sales, and time to be paid. Businesses that spend on technology and adopt cloud-based approaches are reaping the benefits of reduced disruption in times of uncertainty and greater flexibility as they scale their business.

However, there is no single digitalisation journey. Small businesses have different experiences depending on country, industry, and the size of their business (as measured by employee numbers). Despite the clear benefits of adopting technology, not all small businesses have begun or progressed along the digitalisation journey.

To better understand the barriers to digitalisation, Xero has undertaken a unique study that looks at the behavioural barriers blocking small business take-up of technology. This companion report, One Step: Behavioural barriers to technology adoption amongst small businesses – and how to overcome them, looks at the human aspects of why many small businesses are not embracing digitalisation.
Appendix

Measuring digitalisation

Information and communication technology (ICT) expenses are estimated by reviewing the expenses of Xero subscribers and categorising expenses which contain certain keywords associated with ICT. These categories and matching criteria are shown in table A.1.

Expenses within each of the four categories shown in table A.1. were summed to estimate total ICT expense value per month, per firm. We then divide by the firm’s total expenses in that month to arrive at the ICT expense ratio, which we express as a percentage.

It is important to note that this analysis does not include amounts spent on ICT that have been recorded in Xero as an ‘asset’ or a ‘subscription’ where there is not sufficient context to ensure that the expense was related to ICT.

App usage or engagement or interaction is quantified by measuring the number of times a firm ‘interacts’ with an app that is connected to their Xero account. We define an interaction as an activity which results in an API call to the app, such as:

- logging into an app from their business account
- uploading data (e.g. invoices) to the app
- downloading data (e.g. analytics, past results) from the app

All interactions that a firm makes with apps each month are summed, providing a total number of monthly sessions. To limit the impact of API calls that are unlikely to be meaningful interactions, we restrict the number of monthly sessions per app to be one per day. In effect, this means the dataset is not overweighted to apps that require repeated API calls (i.e. interactions) to perform one task.
# Measuring digitalisation

## Table A.1. ICT expenditure matching

<table>
<thead>
<tr>
<th>Expense category</th>
<th>Description</th>
</tr>
</thead>
</table>
| Telephone & internet (exact matching) | • Based on bills paid related to telecommunications and internet  
                                      • Expenses are flagged if they are an exact match to ‘telephone’ or ‘telephone and internet’ |
| Computer & hardware (exact matching) | • Based on computer hardware and other hardware purchased for the business  
                                         • Expenses are categorised if they contain an exact match to ‘computer expenses’, ‘computer software’, or ‘computer equipment’ |
| Internet (exact matching)         | • Based on internet expenses paid by the firm  
                                      • Expenses are categorised if they contain an exact match on ‘internet’  
                                      • Mutually exclusive with the ‘telephone and internet’ category – expenses categorised as such are not double counted as internet expenses |
| Partial ICT expenses (substring matching) | • Partial matching process to capture ICT expenses that may not be categorised by an exact match  
                                         • Expense items must not contain one or more of ‘crane’, ‘plant’, ‘heavy’, ‘kitchen’, ‘patrol’, ‘advertising’, ‘adv’, ‘ads’, ‘marketing’, ‘mktg’, or ‘mkt’. This is to ensure that an expense titled, ‘for example’, ‘mobile kitchen’ is not falsely categorised as an ICT expense |
**Cohort analysis**

The cohort analysis presented in this report is constructed such that each group of firms contains a near-identical sample composition in respect to country, industry, and firm size. These control variables were chosen as they were found to influence ICT expenditure and app usage the most. Further details are available in Figure A.1.

**Fig A.1. Additional details on cohort selection**

Distributions displayed are for indicative purposes only

---

### Cohort selection methodology

We found that country, industry, and firm size (employee count) are the largest underlying sources of variation in ICT expenditure, and to a lesser extent, app usage.

Hence, we assign the app usage/ICT expenditure quartiles such that each quartile has a near identical sampling of the Xero subscriber base, preventing overweighting of a country/industry/firm size in any particular quartile.

We also assign quartiles based on pre-COVID (Jan. 2019 – Dec. 2019) ICT expenditure/app usage, addressing the potential causality issues associated with assigning quartiles based on activity during the COVID-19 crisis.

---

### Distribution of professional services firms by selection method

**Increasing ICT expenditure**

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
</table>

If we do not control for industry while assigning cohorts, professional services firms will be overweighted in the upper quartiles of ICT expenditure, as shown above. In the example below, we control for this effect:

| Q1 | Q2 | Q3 | Q4 |

As a result, each quartile correctly contains 25% of the total sample of professional services firms. We repeat this process for other significant sources of bias – country and firm size.

*Source: Xero Small Business Insights, Accenture*
Cohort analysis

Average values for ICT expenditure by country are presented in table A.2.

Table A.2. 2019 ICT expenditure by country and quartile
ICT expenditure as a share of total expenses (%), 2019 average

<table>
<thead>
<tr>
<th>ICT expenditure</th>
<th>Australia</th>
<th>New Zealand</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 (Low expenditure)</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Q2</td>
<td>0.6%</td>
<td>0.6%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Q3</td>
<td>1.4%</td>
<td>1.2%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Q4 (High expenditure)</td>
<td>4.7%</td>
<td>3.7%</td>
<td>7.4%</td>
</tr>
</tbody>
</table>

Source: Xero Small Business Insights, Accenture
App usage or engagement or interaction is the number of times a firm ‘interacts’ with an app that is connected to their Xero account. An interaction is an activity which results in an API call to the app, such as logging into an app from their business account or uploading data (e.g. invoices) to the app or downloading data (e.g. analytics, past results) from the app.

Current state refers to the latest half year of data, January 2021 to June 2021 inclusive.

Digitalisation is the extent to which businesses leverage technology to support and streamline their operations.

Financial year refers to the period of July to June (the Australian financial year) for all three countries, for comparability purposes.

Information and communication technology (ICT) expenses are the subset of total expenses which have been categorised or denoted by keywords associated with ICT. Categories include computer hardware, telephone and internet. A full list can be found in the appendix.

Jobs is a metric equal to the number of unique people being paid for at least one hour of work within a given month.

Quartile is one of four groups containing 25% of data points when data points are ordered from smallest to largest.

Sales is a metric which sums the total value of invoices raised during calendar month.

Small business is defined as one of the following for the purposes of this report:

- A business operating in Australia with fewer than 200 employees and annual sales of less than AU$50 million.
- A business operating in New Zealand with fewer than 50 employees and annual sales of less than NZ$30 million.
- A business operating in the United Kingdom with fewer than 50 employees and annual sales of less than £6.5 million.

Time to be paid is a metric capturing the average time between an invoice being raised and when it is fully paid.
Data sources and disclaimer

About Xero
Xero is a cloud-based accounting software platform for small businesses with over 3 million subscribers globally. Through Xero, small business owners and their advisors have access to real-time financial data any time, anywhere and on any device. Xero offers an ecosystem of over 1,000 third-party apps and 300 plus connections to banks and other financial partners. In 2020 and 2021, Xero was included in the Bloomberg Gender-Equality Index and in 2020, Xero was recognised by IDC MarketScape as a leader in its worldwide SaaS and cloud-enabled small business finance and accounting applications vendor assessment.

About Accenture
Accenture is a global professional services company with leading capabilities in digital, cloud and security. Combining unmatched experience and specialized skills across more than 40 industries, we offer Strategy and Consulting, Interactive, Technology and Operations services — all powered by the world’s largest network of Advanced Technology and Intelligent Operations centers. Our 624,000 people deliver on the promise of technology and human ingenuity every day, serving clients in more than 120 countries. We embrace the power of change to create value and shared success for our clients, people, shareholders, partners and communities. Visit us at www.accenture.com.

About Xero Small Business Insights
The aim of Xero Small Business Insights is to create insights to help inform decision makers in support of the small business economy as a whole. These insights were produced by Xero and Accenture for Xero Small Business Insights.

The principal source of small business insights in this report is customer data from Xero, a small business platform that supports online accounting and a range of other applications. Xero is a responsible custodian of its customers’ sensitive data and does not release any data that could identify individual businesses. The data used is aggregated and anonymised to ensure the privacy of Xero subscribers, and their counterparts. Visit us at www.xero.com/us/resources/small-business-insights/

Disclaimer
This report, including the insights and analysis contained within it, was prepared by Accenture with the support of Xero, using Xero Small Business Insights data, publicly available data, and Accenture estimates for the purpose of informing and developing policies to support small businesses.

This report was commissioned by Xero Limited and prepared by Accenture. This report includes and is in parts based on assumptions or estimates. It contains general information only, does not constitute advice of any nature and should not be taken as taxation, regulatory, medical, audit, financial, investment or legal advice. Xero recommends that readers always obtain specific and detailed professional advice about any business decision.

The insights in this report were created from the data that was available as at the date it was extracted. The data used was anonymised and aggregated to ensure individual businesses could not be identified.

While the information in this document has been prepared in good faith, Accenture disclaims, to the fullest extent permitted by applicable law, any and all liability for the accuracy and completeness of the information in this document and for any acts or omissions made based on such information.

Opinions expressed herein are subject to change without notice. This document may make references to third party names, trademarks or copyrights that may be owned by others. Any third-party names, trademarks or copyrights contained in this document are the property of their respective owners.