

NAB ONLINE RETAIL SALES INDEX OCTOBER 2019

NAB Group Economics

- The NAB Online Retail Sales Index contracted in October (-1.4%) on a month-on-month, seasonally adjusted basis. This follows two exceptionally strong months in August and September.
- In year-on-year terms, the growth in the NAB Online Retail Sales Index weakened (+7.3% y/y s.a.) in October, but continues to outpace the broader ABS retail sales series.
- October data shows mixed results, with sales for half the online retail categories contracting in month-on-month growth terms. The largest sales category, homewares and appliances (-4.7% mom, s.a.), was worst performing in the month, and a key contributor to the headline result given its relative weight in the index. Growth was strongest in the month for the second largest spend share category, grocery and liquor. However, this growth, along with games and toys, personal and recreational, and takeaway, was insufficient to offset the drop in the other categories. Grocery and liquor has performed strongly this year and is approximately 14% larger compared to the same period 2018. For more detail, see Charts 3, 5, 7 & 8 below.
- In month-on-month terms, all states and territories recorded sales contraction. Tasmania, which had led growth in the past two months, was weakest in October (-6.4%). Of the large sales states, while still negative, VIC (-0.7%) performed better than the headline result, along with smaller sales state, SA (-0.6%).
- Metro areas contracted in-line with the overall index. Regional areas also contracted, but at a much slower rate (-0.3%), after a flat result in September. In contrast to the headline result, regional SA (+1.3%) and NSW (+0.4%) grew in the month. In all states except WA, metro areas performed worse than regional areas, with metro VIC the least negative. See Charts 15 and 16 for more detail.
- Although growth slowed in month-on-month terms, international online retailers recorded growth for a fifth straight month (1.0% mom, s.a.), outpacing domestic competitors, whose sales growth was negative. The large spend share category for international, fashion, contributed heavily to the result (+1.2%), with domestic competitors in the same category contracting. The headline contraction in the largest overall sales category, homewares and appliances, was solely domestic (-4.7%), with the small category for international virtually flat (+0.2%). See charts 13 and 14, and table 3 for category growth and share.
- We estimate that in the 12 months to October, Australians spent \$29.84 billion on online retail, a level that is around 9.1% of the total retail trade estimate (September 2019, Series 8501, Australian Bureau of Statistics), and about 10.9% higher than the 12 months to October 2018.
- See comments from NAB's Chief Economist, Alan Oster, on page 2.

Year-on-year growth (% s.a.)			
	Jul-19	Aug-19	Sep-19
NAB Online Index	8.7	11.0	7.3
ABS Traditional Retail	2.5	2.5	

Month-on-month growth (% s.a.)			
	Aug-19	Sep-19	Oct-19
NAB Online Index	5.1	2.1	-1.4
ABS Traditional Retail	0.4	0.2	

Sources: NAB, Australian Bureau of Statistics (ABS). *Data seasonally adjusted (s.a.) using TRAMO/SEATS (incl. trading-day & Easter adjustment.)

Chart 1: Online retail sales and ABS retail sales

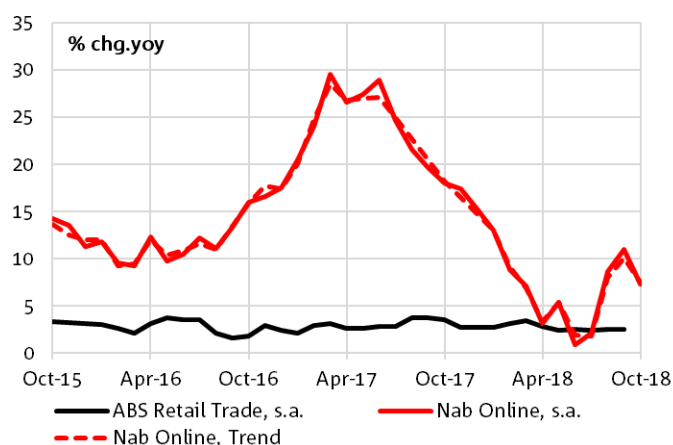
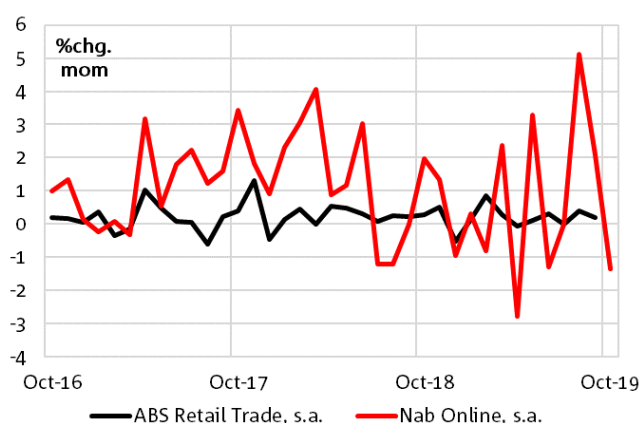


Chart 2: NAB Online retail trade data (mom, s.a.)



NAB Chief Economist, Alan Oster commented:

Our NAB Online Retail Sales Index data indicates that, after two solid months of growth in August and September, online retail sales weakened in October. Online retail sales tend to be more volatile than broader retail, experiencing far greater monthly fluctuations, but the past six months have been considerably more so. Looking through the month-to-month volatility, sales growth in year-on-year terms slowed, although it, and the 12-months-to October growth, remained much faster than comparable traditional retail sales growth.

In month-on-month terms, there was further improvement in sales growth for the second largest sales category, grocery and liquor. Growth in this category was driven by domestic merchants, which make up the bulk of sales, with international sales growth for this category slightly negative in the month. The largest sales category, homewares and appliances, recorded a significant monthly contraction in sales, and was a key contributor to the headline result. This category was significantly impacted by the mid-year sales weakness, so much so, that its share of the online index has dropped from around 28% a year ago to about 26% now. The smallest sales category, takeaway food, has been the most volatile in terms of sales growth, possibly due to structural changes by way of high profile exits and consolidation. Through this volatility, this category's sales are up 80% when compared to the monthly sales of October 2018, and is almost 50% larger in the 12-months-to October 2019.

The three most populous states represent just over 80% of all online sales, slightly above their share of the population. Of these large sales states, Victoria leads in year-on-year growth, with ACT and NT leading the smaller sales regions. On average, online sales growth in Victoria has been higher than NSW over the past couple of years. Consequently, the gap in spend share between the two is narrowing.

Representing about two-thirds of all online sales, metropolitan areas recorded a bigger contraction in sales growth in October, relative to regional areas. This generally followed across all states except WA, where regional sales growth contraction was larger than metro areas. In addition, regional online retail continued to grow in NSW and SA, indicating that the headline contraction for these states was driven by metro areas.

By merchant location, international retailers (+1.0%) grew strongly in the month, while domestic (-1.6%) retailers contracted. While key domestic categories of grocery and liquor, and personal and recreational continued to grow, it was insufficient to offset weakness in the sales categories of homewares and appliances, media, fashion, and department stores. Fashion, games and toys, and small sales category takeaway food contributed to the continued growth for international merchants.

It is worth noting here that our definition of a domestic online retailer can include those merchants whose parent organisation might be overseas with an Australian subsidiary. Solely using GST as a key defining characteristic of domestic and international is no longer appropriate given changes made in July 2018.

Chart 3: Online retail sales by industry, yoy s.a.

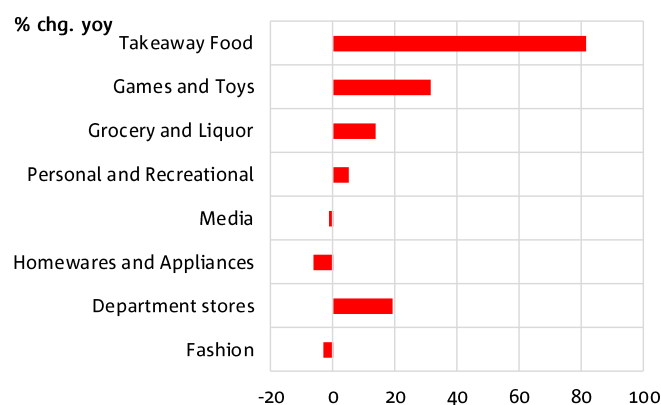


Chart 4: Online retail sales by state, yoy s.a.

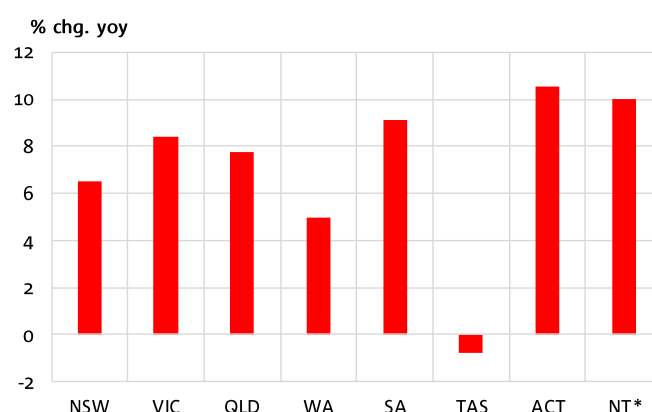
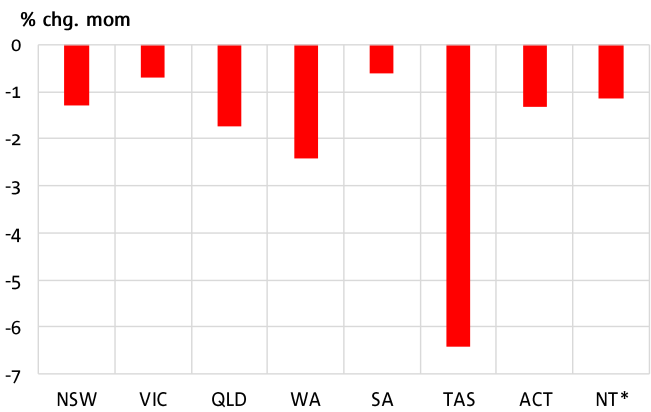


Chart 5: Online retail sales by industry, mom s.a.

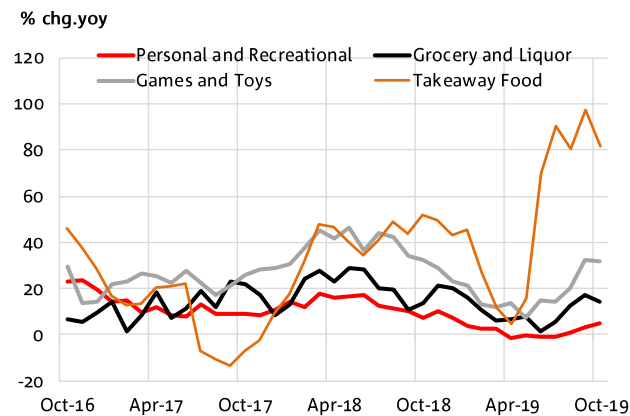
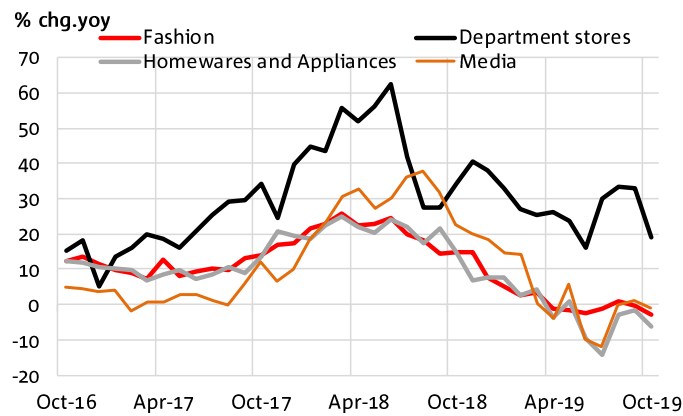


Chart 6: Online retail sales by state, mom s.a.

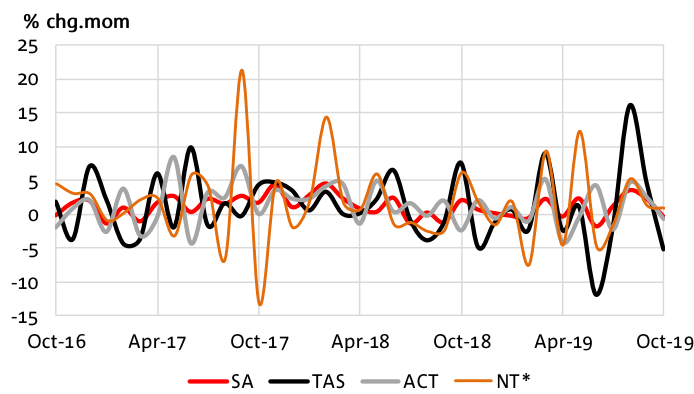
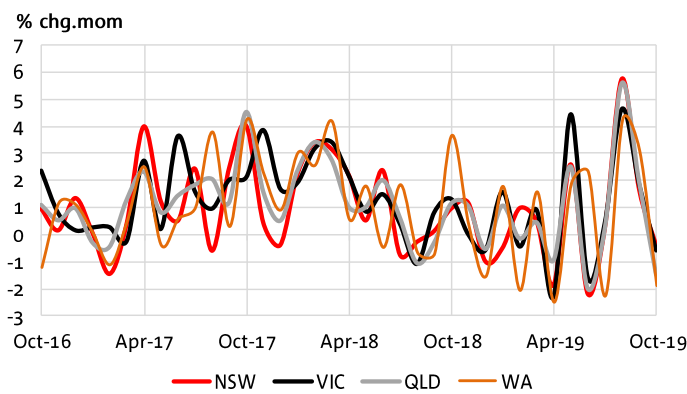


* Note that the series representing Northern Territory is highly variable and should be used with caution.

Charts 7 & 8: Online sales by category, seasonally adjusted

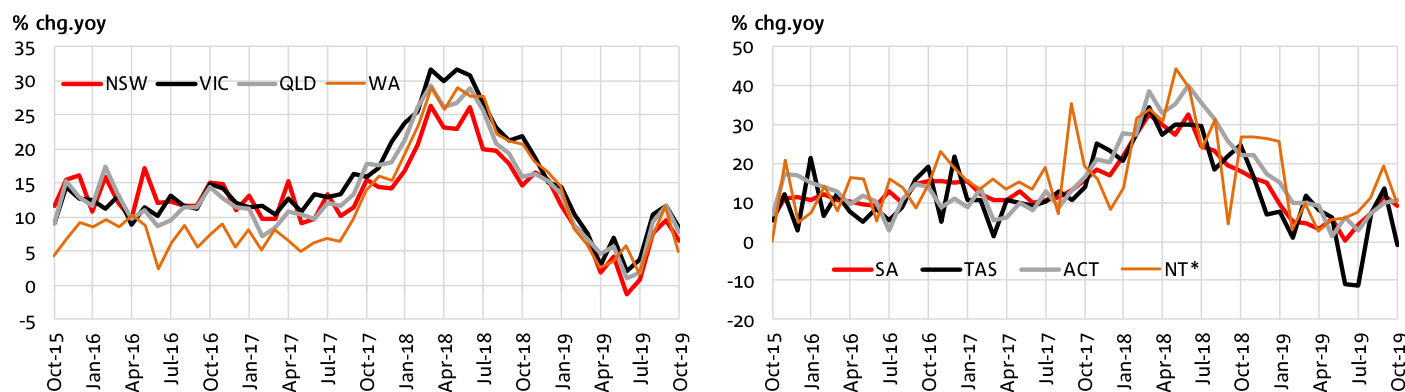


Charts 9 & 10: Online sales by state, trend



*Note that the series representing Northern Territory is highly variable and should be used with caution.

Charts 11 & 12: Online sales by state, yoy, s.a.



Charts 13 & 14: Online sales by merchant location

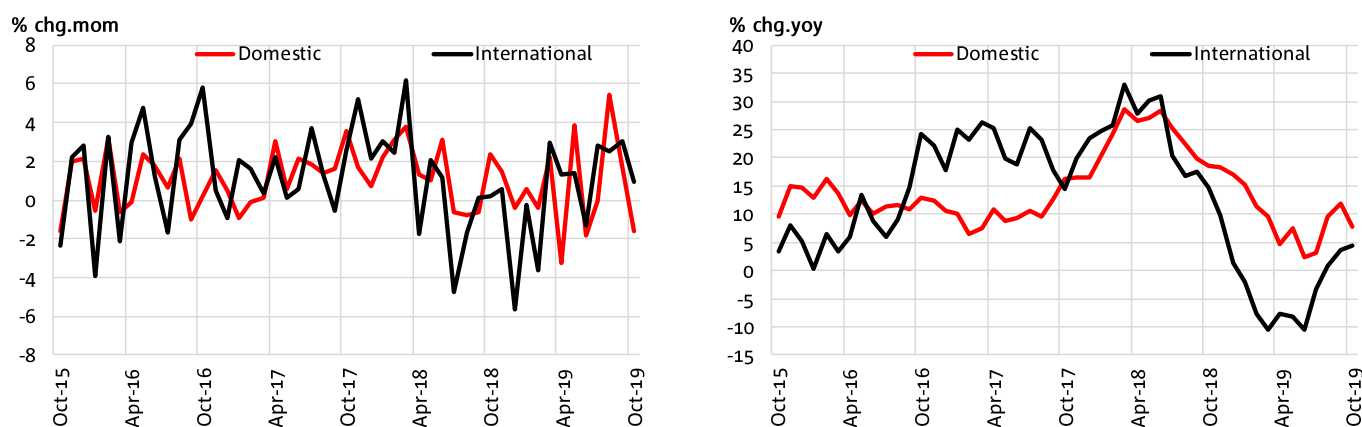


Table 3: Online sales by category and merchant location- Domestic, International (Int'l)

%	Monthly growth – Domestic	Monthly growth – Int'l.	Annual growth – Domestic	Annual growth – Int'l.	Domestic Share of Category Spend	Int'l Share of Category Spend	Overall Category Spend Share
Fashion	-0.9	1.2	-1.3	-6.6	78.1	21.9	12.3
Department stores	-2.7	-5.2	23.2	-4.9	87.3	12.7	14.1
Homewares and appliances	-4.7	0.2	-6.2	5.1	95.6	4.4	25.8
Media	-3.2	-6.3	-1.6	-0.6	90.2	9.8	8.1
Personal and Recreational	1.1	2.0	6.3	1.1	86.7	13.3	14.6
Grocery and Liquor	1.5	-0.5	14.0	-0.8	95.0	5.0	14.7
Games and Toys	-0.1	9.1	26.7	44.3	75.0	25.0	6.8
Takeaway Food	0.3	12.6	80.6	61.7	98.1	1.9	3.5
All categories	-1.6	1.0	7.6	4.4	89.1	10.9	100

METROPOLITAN AND REGIONAL SPEND

Chart 15: Online retail sales growth by region, mom s.a.

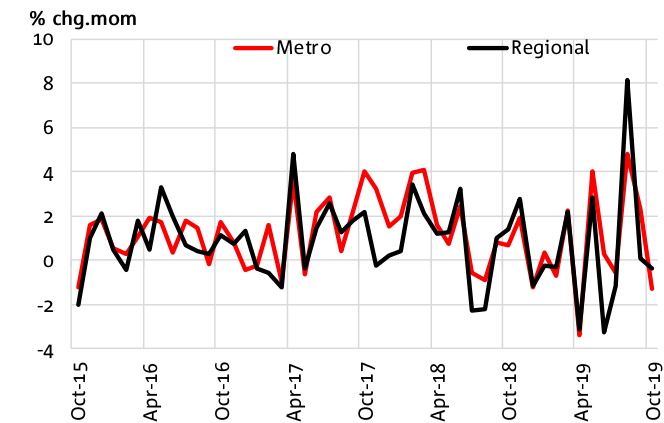
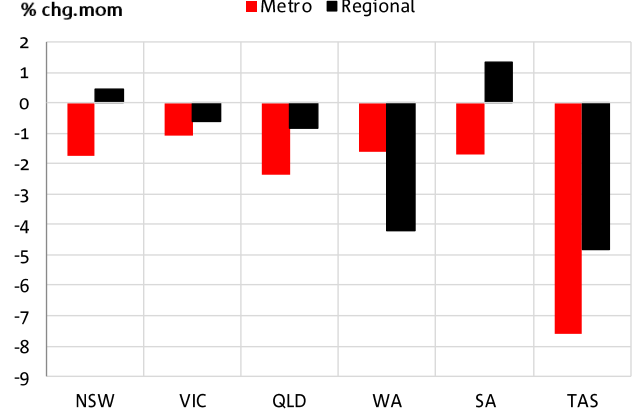
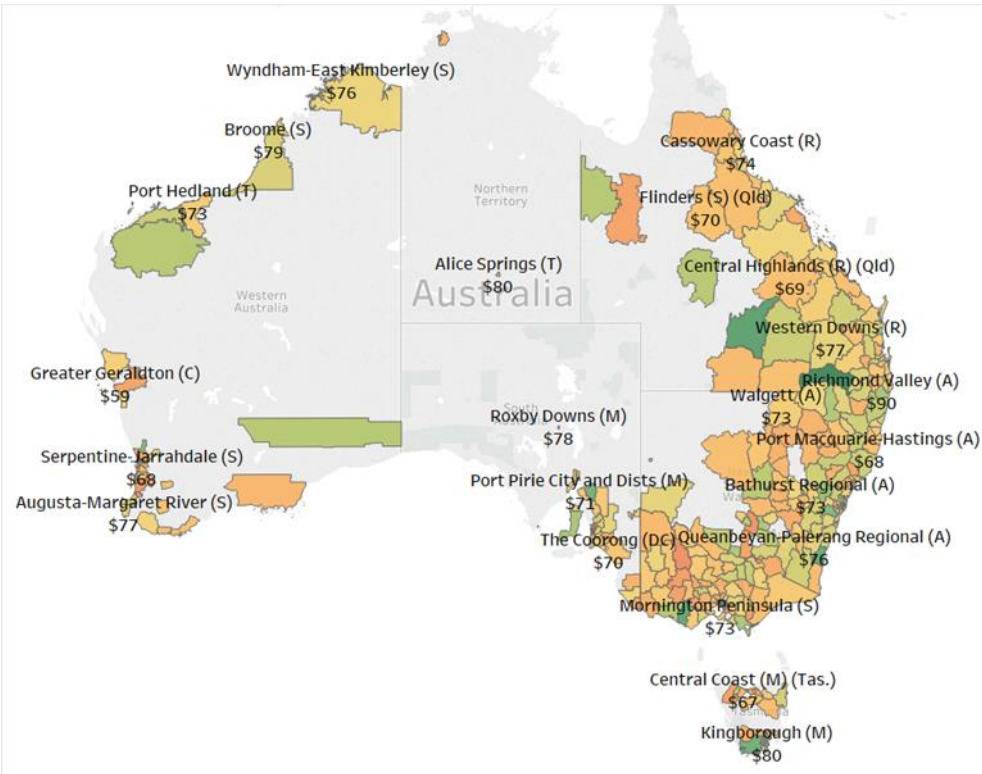


Chart 16: Online retail sales growth by state region, mom s.a.



A HEATMAP VIEW OF AVERAGE ONLINE SPEND BY LOCAL GOVERNMENT AREA

Online spend can vary depending on where people live. The map below shows average spend for each online transaction. Not all the top average spend areas are in capital cities, nor are they all in remote areas.



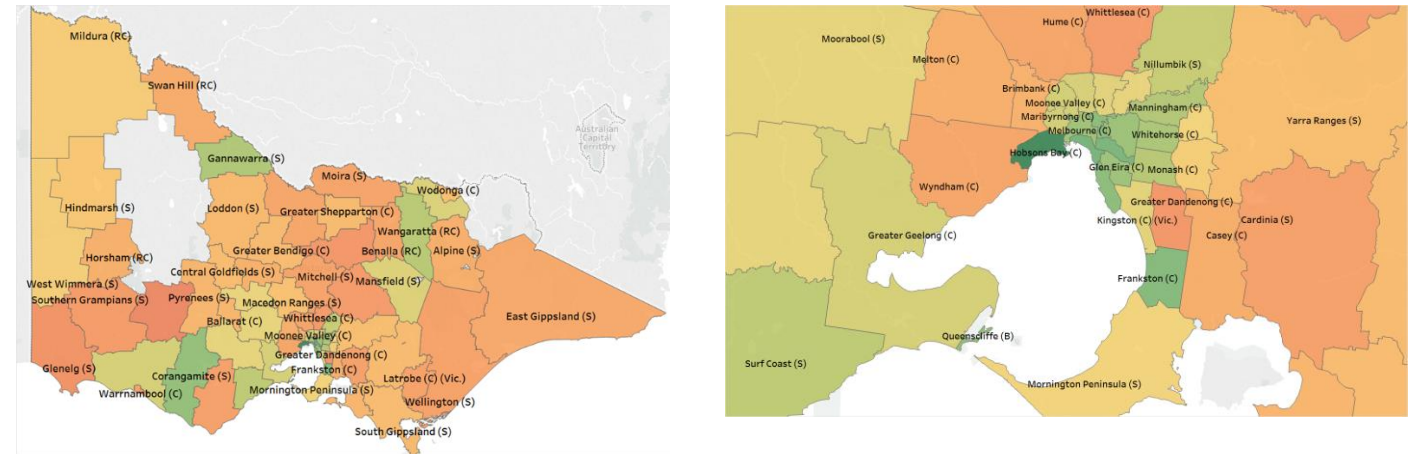
DEEP DIVE - A HEATMAP VIEW OF ONLINE SHARE OF CATEGORY SPEND – TWO EXAMPLES - GROCERY AND LIQUOR AND FASHION - BY LOCAL GOVERNMENT AREA – VICTORIA ZOOM

In total, online retail sales represent around 9% of all retail sales. In the heatmaps below, areas shaded deeper green represent a higher penetration of online sales relative to the average.

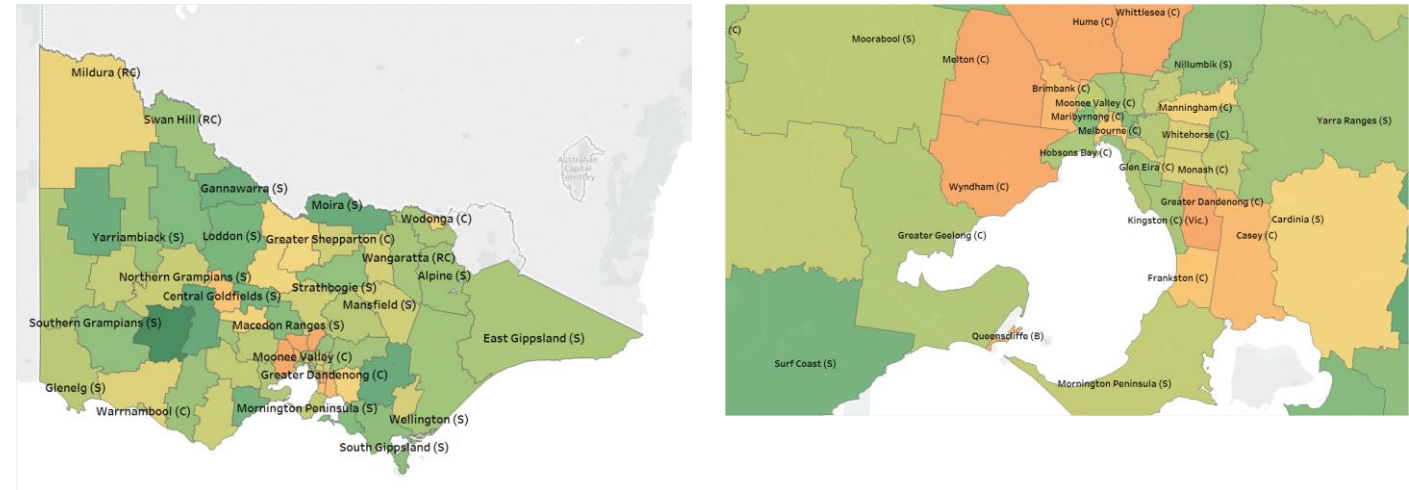
For Grocery and Liquor around 4 to 5% of all sales are now online. From the results below, with a few regional exceptions, grocery and liquor tends to generally be a metro story. Even within metropolitan Melbourne, there are areas where online Grocery and liquor is more prominent, with most outer areas generally lower.

As a proportion, online sales for fashion relative to total fashion sales tend to be higher than the headline total. In some locations, more than a fifth of all dollars spent on fashion are now made online. The heat maps for the online fashion category suggest that it seems to be less confined to metro areas, with online spend a larger proportion of this categories total sales regardless of location.

GROCERY AND LIQUOR



FASHION



APPENDIX: METHODOLOGY

The NAB Online Retail Sales Index is now sourced in-house and is produced by Group Economics. We have made some significant changes to the NAB online series. Importantly, we have merged SME and Corporate Online into a single index, and provide more detail by region and industry on a monthly basis.

It is derived from NAB transactions data that have been assigned from particular merchant codes to retail industries by state. To keep the series reasonably consistent with past series, we have left these category descriptions broadly unchanged, albeit we now include new entrants to the Australian market. Against that, we have however removed the standalone previously reported category of 'Daily Deals', as this category was considerably volatile and caused statistical issues with indirect seasonal adjustment.

The NAB Online Retail Sales Index measures all Online Retail spending by consumers using various electronic payment methods such as credit cards, BPAY, and PayPal. We have made adjustments for where merchants appear to be wholesaling goods as opposed for final household consumption, and also incorporate new standards involving purchases using stored customer details. The index is derived from personal transaction data from NAB platforms and is scaled up to be representative of the economy by using scalars including ABS Estimated Resident Population, and RBA payments data.

NAB electronic transactions data for the compilation of this series is collected in real time at event record level, which allows significant flexibility to segment the data by age, time, location and merchant type. In future months, we plan to expand the data provided from the series as we bed-in acceptable seasonal adjustment factors for the new series. Transactions included in these data may incorporate purchases by Card, BPAY, Bank Transfers, Direct Debits and PayPal services where available, and include transactions with Australian and international merchants. Spending represented here includes transactions we have identified as online. NAB's estimate of the online retail market is larger than that of the official ABS measure of Online retail trade as it covers businesses that may not be within the remit of the ABS business register, such as overseas online retailers.

In the previously published series, we were using online retail sales by merchants with turnover greater than \$2.5m ('Corporate') as a proxy for online sales growth of the whole online market. This was due to the shorter time series of the previous market estimate and associated seasonal adjustment issues. With the new extract, we now have sufficient time series, and the growth rates represented are for the total market – i.e. Corporate and SME combined in a single series.

The data captures electronic retail online transactions and is therefore subject to the changing nature and take-up rate of electronic payment methods. Hence, change in growth in the overall transaction value may be attributable to either an increased preference towards a payment type by consumers (such as buy now pay later schemes), or a change in the level of spending across the economy by consumers, i.e. a pick-up in nominal online sales. We continue to work to isolate these effects.

Customer spending is based on where the customer lives, which may or may not be where the actual spending activity occurs. Customers without an Australian residential address are excluded.

These estimates are developed from transaction micro level data are then aggregated to higher level categories based on transaction attributes. The data is made representative of national sales activity by applying both demographic attributes to customer location using the most recent ABS Estimated Resident Population, and comparing NAB transaction data to RBA payments system data. Changes in these data is reflected in the NORSI market size estimate timeseries.

The industry and state data have been seasonally adjusted using Tramo-SEATS with a trading day and Easter adjustment. Given the relatively short time frame for the data, this seasonal adjustment process should be regarded as provisional: estimates are likely to change as a longer run of data becomes available, and can be revised from month-to-month given the concurrent process. The trends have been extracted from the same process. Note that the NORSI series prior to December 2018 was using Census Bureau Seasonal adjustment, and a Henderson 13 was applied for trend.

Our aim is to have a data series that is as reflective as possible of online retail spend. As such, each month we will revise previous data to take into account changes in payment processing such as chargebacks and delayed payments. Given these attributes, typically, larger revisions occur to the most recent months, and diminish as the data ages, but the latter effect cannot be excluded.

Our data differs to that of the ABS series as the NAB series covers a broader spectrum of online retailers – overseas merchants selling to Australian residents for example, and categories that substitute for previously retail purchased goods. Categories such as music and book retailing, and electronic games form part of the current online estimate. These are now substitutes for what may have been purchased in-store, but are now provided by online media streaming companies. While these may not fit the strict retail trade definition, our data reveals that they are increasingly being used by customers who previously purchased media in-store. We incorporate these companies into our estimate of online retail sales.

As part of the continual improvement of the series, this month we have revised our total market estimates. We have identified and removed potential wholesale trade transactions made on personal accounts. We have also identified more transactions that are made using a 'stored credentials' technique of online purchases. This technique is increasing in popularity as consumers opt for convenience especially with purchases made using mobile apps. Finally, in March 2018 the RBA made changes to its Payments System Data which we use as an input into our estimate of online total market size. These revisions are retrofitted to the series history.

We have also added a comparison based on metropolitan and regional areas. The definition of these geographical areas is based on the ABS geographical concordance tables, specifically the Greater Capital City Statistical Areas (GCCSAs).

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