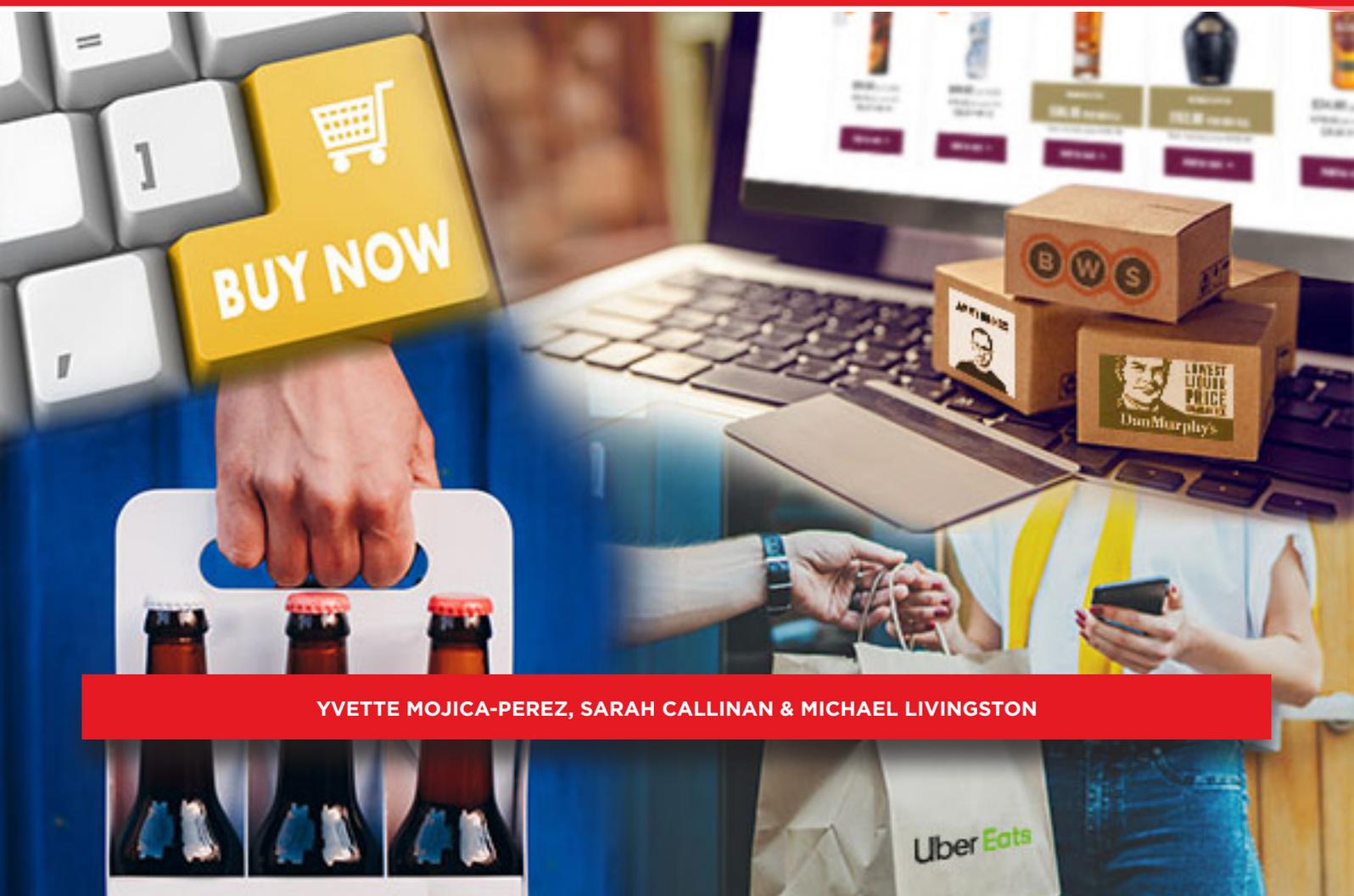


ALCOHOL HOME DELIVERY SERVICES: AN INVESTIGATION OF USE AND RISK

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Summary

Online delivery services account for a growing share of the alcohol market in Australia, currently estimated at around five per cent of all sales and increasing by at least 10 per cent per year. Online delivery services operate in an uncertain regulatory environment and there has been little research into their use in Australia.

This study surveyed a convenience sample of 528 participants aged 18 to 69 who used an online alcohol delivery service in the past month, in order to examine online alcohol purchasing.

While not a representative population sample, this study is nonetheless significant in as much as it provides the first detailed information on people who order online alcohol in Australia.

There were four main delivery service types used by our participants in their last online alcohol delivery service order: bottle shops, wine clubs, specialised fast delivery, and other services (for example, purchases direct from wineries).

More than half of the respondents (59.5 per cent) reported having used bottle shops to buy alcohol online. Wine clubs (30.5 per cent) and specialised fast deliveries (such as Jimmy Brings and Uber Eats; 15.9 per cent) were also commonly used.

Participants selected convenience, value for money, product range and price as their main reasons for using online delivery services.

Specialised fast delivery orders were most commonly ordered in the evening (6pm-12am), while orders from bottle shops and wine clubs occurred mostly in the afternoon (12pm-6pm).

Of concern, more than one-third of respondents aged 25 years and under did not have their ID checked when receiving their last order. Overall, 12.1 per cent received their order in person and did not have their ID checked, while a further 24 per cent did not personally receive their delivery (the order was unattended at home or they had the order accepted by someone else).

Bottle shops and specialised fast delivery services were more popular with respondents aged 18 to 29, while wine clubs were more popular with respondents aged 30 to 49.

Participants who received their most recent order within two hours were categorised as ordering from an on-demand delivery service. On-demand services were provided by both bottleshops and specialised fast delivery services. Indicative of the market strength of established players, around half of all respondents receiving on-demand deliveries had ordered from traditional bottle shops like Dan Murphy's and BWS that offer specific on-demand services, rather than from specialised and newer fast delivery services like Jimmy Brings.

In our sample, on-demand delivery orders were most popular among the youngest age group of 18 to 29 (55.4 per cent).

Of note, more than a quarter (28 per cent) of respondents who received an on-demand order stated that they would have had to stop drinking alcohol if the delivery service was not available.

Sixty-nine per cent of respondents who received an on-demand order reported consuming five or more standard drinks on the same occasion as their order. Participants whose last order was an on-demand order generally drank more heavily than those whose last order

took longer than two hours. For example, 28 per cent of participants who last ordered on-demand reported consuming 11 or more standard drinks in one occasion at least weekly, compared with 10 per cent of other participants.

One in five participants (22 per cent) who ordered via an on-demand delivery service indicated that they made the order because they were over the blood alcohol limit to drive.

Our data suggests that the current regulatory approaches to online alcohol delivery need to be improved. We found sizable proportions of young users receiving orders without having ID checked; on-demand deliveries being used to extend heavy drinking occasions; and the use of these services by risky drinkers.

Given the ongoing growth of online alcohol delivery in Australia, it is critical that policy-makers develop appropriate regulatory processes while the industry is still relatively young and before levels of harm increase.

Introduction

There has been a dramatic increase in the number of online liquor outlets in Australia in recent years¹, with growth expected to continue. This growth has been driven by a mix of both existing retailers shifting into the online space and new players in the market. A market research report on online alcohol sales in Australia², estimates that in 2019 around five per cent of all alcohol is sold via online channels (approximately 13 per cent of total wine sales made online), with growth forecast at more than ten per cent per year over the next five years. Between 2014 and 2018, online sales and revenue each grew by around 14 per cent per year².

The results of two population surveys in 2013 and 2018 also suggest substantial growth. In 2013, just four per cent of Australians reported using phone/email/online to purchase off-premise alcohol in the last six months³, rising to 33 per cent by 2019⁴. In 2019, one in eight Australians (13 per cent) who have used an alcohol delivery service reported using this service at least fortnightly⁴.

In this representative sample, bottle shops were the most widely used online delivery service (13 per cent) followed by 'on demand' delivery services that deliver alcohol to your door within an hour or two of the order (11 per cent), online wine distributors (ten per cent) and as part of another purchase online (for example, groceries; eight per cent). The vast majority of the market is controlled by Woolworths (48 per cent) and Coles (16 per cent), although there are a growing number of smaller, specialised operators alongside them².

There remains little research into the specific impacts of these changes to the alcohol market, with little work on whether it has led to higher levels of drinking or specific harm. However, international research literature shows that, in general, increased physical availability of alcohol tends to lead to higher levels of consumption and harm⁵. In the simplest theoretical explanation for these relationships⁶, it is argued that these effects come from reductions in the cost of alcohol – either in purely monetary terms or via increased convenience of purchasing. The growth of online alcohol markets clearly has the potential to reduce both of these costs and thus contribute to potential increases in harm. With this in mind, it is critical that an appropriate regulatory environment is in place. Regulatory systems in Australian jurisdictions were setup to manage 'bricks and mortar' liquor outlets and are not necessarily well designed for the changing alcohol market. For example, regulation of responsible

service of alcohol, such as age verification is inadequate.^{7,8} Further, social impact assessment processes that operate in many states rely on a fixed outlet location, which doesn't translate easily to delivery services.

Given the lack of clarity in the regulatory environments in most jurisdictions, the Retail Drinks Australia (RDA) has recently launched a code of conduct for the online sale and delivery of alcohol⁹ trying to set out their preferred regulatory approach. This code has been lauded despite remaining entirely voluntary and having a number of major limitations. For example, under the code delivery is permitted between 6am and 1am every day, next-day delivery does not require any identification checking and breaches of the code attract no financial or legal penalty. Further complicating the regulation of delivery services is the recent proliferation of "fast delivery" services – those that guarantee speedy delivery of alcohol. This includes both specialty alcohol services and food delivery services that include alcohol in their menus (often run by operators other than the licensee – for example, Uber Eats). It is not clear that some of these services (especially those where delivery drivers are not employed by the licensee like Uber Eats) would even be covered by the RDA code or how current legislation in most jurisdictions applies to them.

Given the uncertain regulatory environment and the lack of any previous research in this area, it is clear that more knowledge is needed about the use of alcohol delivery services. Thus, the aim of this study is to examine the characteristics of people who use different types of alcohol delivery services, their purchasing and drinking practices and their reasons for using said services. This study relies on a convenience sample of Australians who report recent use of online alcohol delivery services and therefore cannot be relied on for estimates of population prevalence. However, the study provides important contextual information on online purchasing and sheds some light on this little-studied practice.

Method

Participants and procedure

Participants were recruited via a tailored advertisement on Facebook looking for people who use alcohol delivery services. The ad appeared on people's Facebook pages if they met specified inclusion criteria, i.e. they lived in Australia and were 18 years or older. Participants who clicked on the 'Learn More' link in the Facebook advertisement were taken to an online survey. After consenting to participate, participants then answered three filter questions prior to commencing the survey to ensure eligibility. To be involved in the research, participants had to be: over the age of 18, a user of an alcohol delivery service in the past month, and current Australian resident. Eligible participants who completed the survey were given the opportunity to enter a prize draw to win one of three \$50 Coles groceries vouchers. There was a total of 528 participants (54.6 per cent females, 45 per cent males and 0.4 per cent other) aged between 18 and 69 who provided complete surveys.

Measures

The survey mainly constituted close-ended questions and covered the following broad areas: sociodemographic information (such as age, gender, state of residence, and annual income), general use of alcohol delivery services, most recent alcohol delivery services order, and alcohol consumption in the past 12 months. The questions about alcohol delivery services were created and tested internally prior to administering – other items were standard survey items drawing on, for example, the National Drug Strategy Household Survey.

Participants were asked in detail about their last online alcohol delivery service order, including the beverages purchased (beer, bottled wine, cask wine, spirits, premix, cider, and fortified wine) and the quantity of each product (measured in different-sized cans or bottles). Using this information, the number of standard drinks purchased in this order was calculated. We calculated the number of standard drinks by multiplying the alcohol beverage's volume (in millilitres) by the percentage of alcohol content by the quantity, this number was then divided by 12.5, the specific weight of alcohol (for example, for a small bottle [375ml] of beer [4.48 per cent alcohol] the standard drink was calculated by $[0.048 * 375] / 12.5 = 1.44$). The percentage of alcohol content for each beverage type was obtained via the Australian Bureau of Statistics¹⁰ and a report on the minimum unit price in the Northern Territory¹¹. The price per standard drink was calculated from the amount a participant reported spending in their most recent alcohol delivery order and what products they purchased.

Participants were asked to indicate which service they had used for their most recent online alcohol delivery order. Based on the services used, four main categories were created: bottle shops, wine clubs, specialised fast delivery, and other. Participants who received their most recent order in under two hours were asked additional questions. Orders received within two hours are referred to as on-demand delivery services and were made up of some orders from bottle shops as well as specialised fast delivery services. Participants with on-demand orders were asked about their drinking on that specific occasion, with their responses categorised into two variables: risky single occasion drinking (five or more standard drinks) and very high-risk drinking (11 or more drinks). These thresholds are based on the Australian short-term low-risk drinking guideline¹² and the National Drug Strategy Household Survey report (NDSHS¹³), respectfully.

Analysis

Descriptive statistics were conducted using Stata version 15.1¹⁴ and Microsoft Excel to examine the relationship between the use of alcohol delivery services and risky alcohol consumption. Participants were excluded if they were missing on a particular variable, no more than six per cent of participants were excluded from any analysis presented in this study. For highly skewed variables (for example, amount of money spent on an order) we report medians rather than means to avoid potentially misleading inferences.

Results

We present the results in four sections: general use of online alcohol delivery services, last online alcohol delivery service order, on-demand delivery services, and on-demand vs other delivery services.

General use of online alcohol delivery services

The proportions of participants who reported using each of the different delivery services are shown in Table 1. More than half (59.5 per cent) of all participants indicated using bottle shops, followed by 30.5 per cent of participants who had used wine clubs and 15.9 per cent had used specialised fast delivery services.

Table 1: Online delivery services used by respondents (n=528)

CATEGORIES OF ONLINE ALCOHOL DELIVERY SERVICES	ONLINE ALCOHOL DELIVERY SERVICES	PROPORTION USED
Bottle shops (n=314)	1st Choice Liquor, Vintage Cellars, Liquorland, Dan Murphy's, BWS and Thirsty Camel	59.5%
Wine clubs (n=161)	Wine Selectors, The Wine Society, Vinomofo, The Wine Gallery, Naked Wines, Qantas epiQure	30.5%
Specialised fast delivery (n=84)	Knock Knock Booze There, Jimmy Brings, Tipple, Quick Bottle, Uber Eats, Deliveroo, Menulog and Airtasker	15.9%
Online retailer only (n=48)	BoozeBud, Hellodrinks and other (eg. Liquor Home Delivery and MyBottleShop)	9.1%
Wine sellers (n=47)	Winebubble, Cellarmasters and Other (eg. Get Wine Direct, Nick's Wine Merchant)	8.9%
Direct from wineries (n=29)	Other	5.5%
Other (n=24)	Other (eg. GraysOnline)	4.5%

Note: respondents selected all the online delivery services they have used in the past; therefore the proportions will not add up to 100 per cent.

More than a third of respondents (37.5 per cent) reported using an alcohol delivery service at least monthly in the past 12 months and over 70 per cent of respondents were somewhat or highly likely to purchase from an online alcohol delivery service in the next month. A third of our sample (33.9 per cent) reported that more than half of their takeaway alcohol was purchased via online delivery services.

The most commonly selected reasons for using online delivery services are presented in Table 2. Participants selected convenience, value for money, product range (can't buy the specific alcohol products I want at my local bottle shop) and price (cheaper to buy alcohol in bulk online) as their main reasons for using online delivery services. The main reasons given from the 30 per cent of respondents who gave 'other' reasons were special offers and supporting wineries directly.

Table 2: Reasons that respondents have for purchasing alcohol through an online delivery service (n=528)

	PROPORTION
It's more convenient as the alcohol gets delivered straight to my front door	38.1%
It's better value for money	31.4%
I can't buy the specific alcohol products I want at my local bottle shop	26.3%
It is cheaper to buy alcohol in bulk online	25.0%
I am part of a delivery service wine club which provides me with discounts and other rewards	19.9%
It is faster or easier to get alcohol delivered to my front door than to go and get it myself	18.0%
I am over the blood alcohol limit to drive when I make the purchase	8.0%
There are no bottle shops close to where I live	4.5%
Other (please specify)	29.9%

Note: respondents selected all the reasons that applied to them, therefore the proportions will not add up to 100 per cent.

Last online alcohol delivery service order

Participants were also asked about their last online alcohol delivery service order. A summary of the services used and the median amount spent are shown in Table 3. For clarity, we use four broad categories of service rather than the seven presented in Table 1 for the rest of the report.

Table 3: Online delivery services used by respondents, and the median amount spent on alcohol, median number of standard drinks, and the median price per standard drink purchased in the last order (n = 516)

CATEGORIES OF ONLINE ALCOHOL DELIVERY SERVICES	ONLINE ALCOHOL DELIVERY SERVICES	PROPORTION	MEDIAN SPENT (\$)	MEDIAN NUMBER OF STANDARD DRINKS PURCHASED	MEDIAN PRICE PER STANDARD DRINK (\$)
Bottle shops (n=255)	1st Choice Liquor, BWS, Dan Murphy's, Liquorland, Thirsty Camel and Vintage Cellars	49.4%	89.00	44.8	1.86
Wine clubs (n=121)	Naked Wines, Qantas epiQure, The Wine Gallery, The Wine Society, Vinomofu and Wine Selectors	23.4%	150.00	92.2	1.57
Specialised fast delivery (n=53)	Deliveroo, Jimmy Brings, Knock Knock Booze There, Menulog, Tipple and Uber Eats	10.3%	45.00	20.8	2.50
Other (n=87)	BoozeBud and Cellarmasters	16.9%	127.50	67.6	2.17

Almost half (49.4 per cent) of the participants ordered via a bottle shop for their last order, with a median spend of \$89. In their last order, respondents who ordered via wine clubs spent the most, in their last order and ordered a greater median number of standard drinks compared to the other services. Respondents who ordered via specialised fast delivery services (10.3 per cent) reported a higher median price per standard drink and a lower median amount of

alcohol purchased than those who used other delivery services. We included extra questions for respondents who used food delivery services including Uber Eats (n = 10), Deliveroo (n = 4) or Menulog (n = 7). Of these respondents, more than half (57 per cent) stated that their choice of restaurant for their most recent order was influenced by the availability of alcohol.

The reasons that respondents gave for their most recent online purchase are displayed in Table 4. The reasons varied substantially depending on the nature of the service used.

Table 4: Reasons that respondents gave for purchasing alcohol through an online delivery service (n=514)

	BOTTLE SHOP (N=254)	WINE CLUB (N=121)	SPECIALISED FAST DELIVERY (N=52)	OTHER (N=87)
It was more convenient as the alcohol gets delivered straight to my front door	36.6%	16.5%	63.5%	14.9%
It was better value for money	26.8%	35.5%	1.9%	47.1%
I can't buy the alcohol products at my local bottle shop	17.3%	24.8%	1.9%	42.5%
It was cheaper to buy alcohol in bulk online	16.1%	24.0%	1.9%	26.4%
I am part of a delivery service wine club which provides me with discounts and other rewards	3.5%	51.2%	1.9%	13.8%
I didn't want to leave the house	9.8%	2.5%	34.6%	1.1%
It was faster to get alcohol delivered to my front door than to go and get it myself	8.3%	4.1%	25.0%	1.1%
I was over the blood alcohol limit to drive	5.1%	0.0%	26.9%	0.0%
There were no bottle shops close to where I live	5.5%	1.7%	9.6%	1.1%
I was out of alcohol and I wanted to keep drinking	2.0%	1.7%	17.3%	0.0%
I was ordering food and added alcohol to the order	3.1%	0.8%	11.5%	0.0%
Other (please specify)	9.8%	58.7%	9.6%	21.8%

Note: respondents selected all the reasons that applied to them, therefore the proportions will not add up to 100 per cent.

The most commonly selected reason for ordering via a specialised fast delivery service was convenience and not wanting to leave the house. In their last order, one quarter of respondents who ordered via specialised fast delivery stated that they used this service due to being over the blood limit to drive. Respondents identified the convenience and better value for money (can't buy the alcohol products at my local bottle shop) as the main reasons for their recent bottle shop order. Respondents who ordered from wine clubs were most likely to give 'other' reasons (58.7 per cent), which predominantly related to a desire to support producers directly and special offers.

The average amount of alcohol purchased in the most recent order (by beverage type) are presented in Table 5. Participants who ordered via bottle shops purchased more wine, followed by spirits and beer. Respondents who ordered via a specialised fast delivery service purchased more spirits than beer or wine. Unsurprisingly, participants who ordered via wine

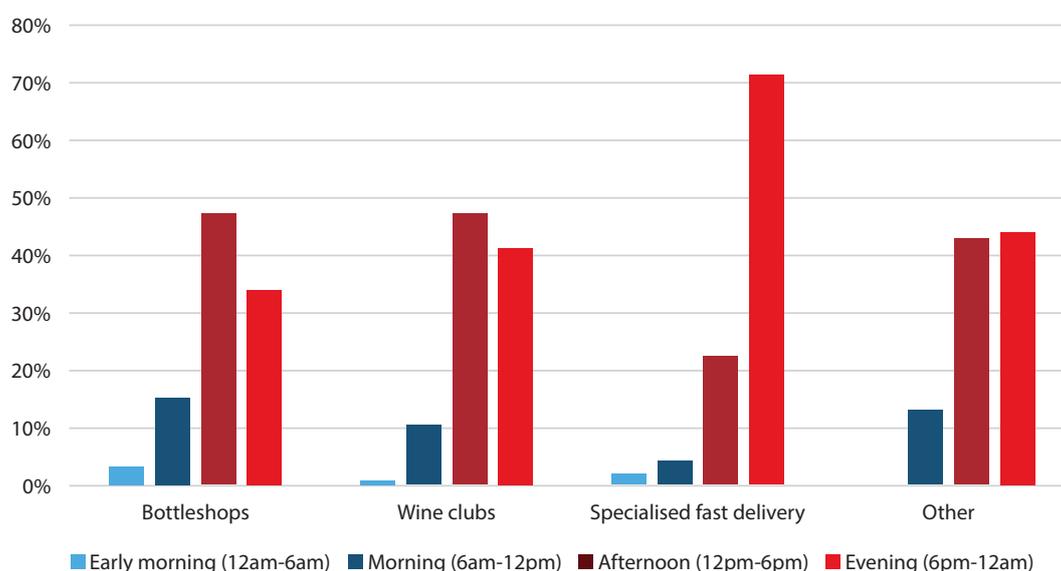
clubs in their last order purchased more wine than any other beverage.

Table 5: The mean number of standard drinks purchased in the last order by alcohol beverage type (n=516)

	BEER	WINE	CASK WINE	SPIRITS	PREMIX	CIDER	FORTIFIED WINE
Bottle shops (n=255)	11.4	26.6	2.3	20.1	3.4	2.2	0.4
Wine clubs (n=121)	0.5	101.2	0.7	0.7	0.0	0.5	0.4
Specialised fast delivery (n=53)	7.4	6.9	0.4	7.7	3.0	3.1	0.4
Other (n=87)	6.3	60.0	0.0	5.2	0.0	0.6	0.9

Figure 1 presents the time that respondents placed their most recent online order, by service type.

Figure 1: Time an order was placed across the different online delivery services (n=496).



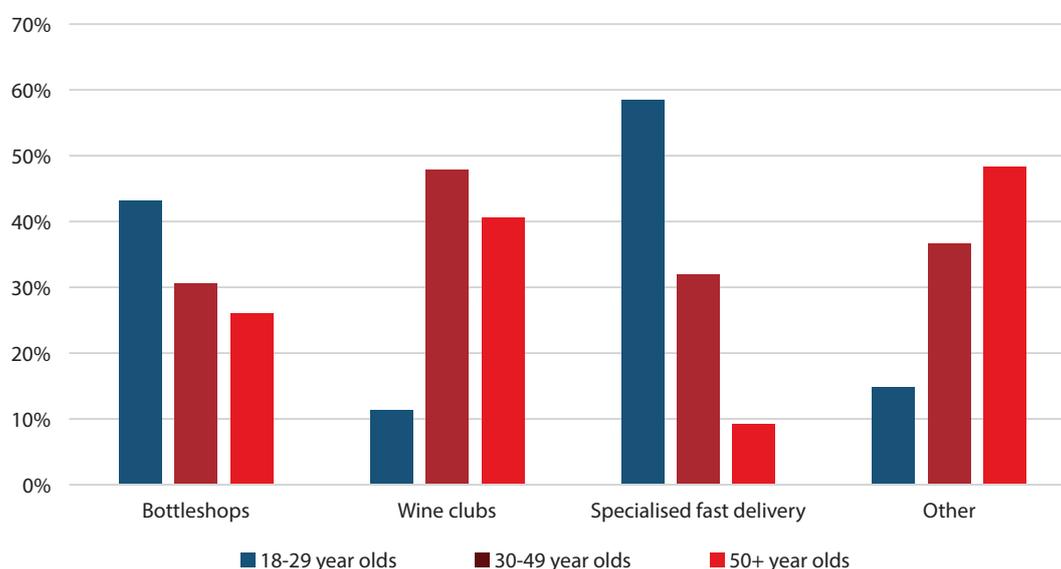
Respondents who ordered via bottle shops and wine clubs most commonly made their orders in the afternoon (12pm-6pm). Most respondents who ordered via specialised fast delivery services in their last order placed their order during the evening (6pm-12am). We looked in more detail at the times that specialised fast delivery orders were made - 51 per cent were between 6pm and 9pm and 20 per cent were between 9pm and midnight. Orders made through other online delivery services were spread evenly across the afternoon and evening.

Respondents were also asked how long it took for their online alcohol delivery to arrive. Half of all bottle shop orders (49 per cent) arrived a day or more after the order was placed, however, 22 per cent of bottle shop orders arrived within two hours of placing the order. As expected, almost all (96 per cent) specialised fast delivery orders arrived within two hours. Respondents ordering from wine clubs received most of their order a day or more later (91 per cent) with the remaining nine per cent reporting their orders as a regularly scheduled order.

We were also interested in how many people under the age of 25 were asked for identification when their online alcohol delivery order arrived. This age was chosen as most bottle shops will require identification (ID) if an individual appears to be under the age of 25. Most respondents aged 25 and under accepted their delivery in person (70.7 per cent, n=82), however 12.1 per cent of respondents aged 25 and under were not asked for ID prior to receiving their order. In addition, respondents aged 25 years and under did not have their ID checked if their order was left unattended at home (10.3 per cent) or they had the order accepted by someone else (13.8 per cent). Thus, in total 36.2 per cent of our sample who were aged 25 and under did not have their IDs checked.

In Figure 2, we can see that most of the specialised fast delivery and bottle shop orders were made among the younger age group. While respondents aged 30-49 mostly used wine clubs in their last online delivery order. Meanwhile, in their last order, respondents aged 50 or above mostly ordered via the other category and wine clubs.

Figure 2: Proportion of respondents aged 18-29 (n = 168), 30-49 (n = 185), and 50+ (n =163) who purchased their last order through one of the different types of online delivery services (n = 516).



In Figures 3 and 4 we look at the general drinking patterns of our sample stratified by which type of online delivery service they used for their last order. Respondents who used specialised fast delivery services were the riskiest drinkers across both our measures. More than half of respondents who last used a specialised fast delivery service reported five or more standard drinks in one occasion at least weekly, while 60 per cent reported 11 or more standard drinks in one occasion at least monthly.

Figure 3. Proportion of respondents who consumed five or more standard drinks in one occasion in the last 12 months for the different online delivery services (n = 515).

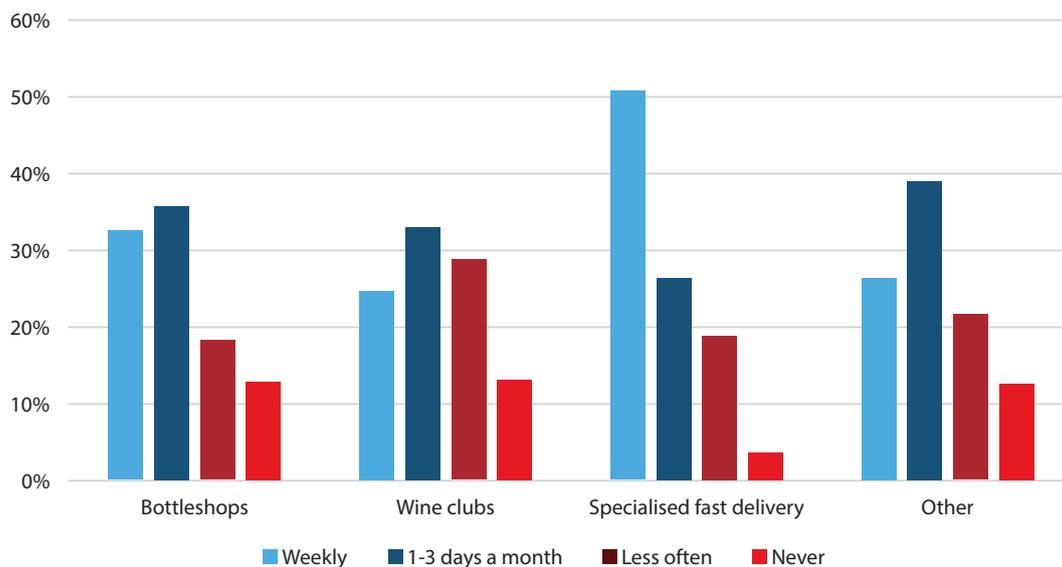


Figure 4. Proportion of respondents who consumed 11 or more standard drinks in one occasion in the last 12 months for the different online delivery services (n = 515).



On-demand delivery services

In this section of the results, we focused on participants who received their most recent online alcohol delivery order under two hours, which accounted for 20 per cent of all orders. Orders received within two hours will be referred to as on-demand deliveries. Not all on-demand delivery services came from fast delivery orders (96 per cent), 22 per cent of bottle shop orders were also on-demand orders. Most of the on-demand deliveries from bottle shops came from Dan Murphy's (44 per cent) and BWS (41 per cent) who explicitly offer fast delivery services. On-demand deliveries came from both specialised fast delivery services (47 per cent; Table 6) and bottle shops (53 per cent).

Respondents who received their on-demand order via bottle shops purchased a higher median number of standard drinks (32.3 standard drinks) compared to specialised fast delivery services (20.8 standard drinks). Participants who purchased via on-demand delivery services spent a median of \$50, with respondents who ordered via bottle shop services spending slightly more on their purchase than specialised fast delivery.

Table 6: Median amount spent, median number of standard drinks, and the median price per standard drink purchased in on-demand deliveries (n=101)

ON-DEMAND DELIVERY SERVICES	MEDIAN SPENT (\$)	MEDIAN NUMBER OF STANDARD DRINKS	MEDIAN PRICE PER STANDARD DRINK (\$)
Bottle shop (n=54)	50.0	32.3	1.67
Specialised fast delivery (n=47)	45.0	20.8	2.50
Total (n=101)	50.0	23.0	1.95

On-demand alcohol delivery orders were most popular amongst the youngest age group (18-29) with more than half of these orders being placed by this age group (bottle shop = 56 per cent and specialised fast delivery = 55 per cent). One-third of bottle shop (31 per cent) and specialised fast delivery service (34 per cent) on-demand orders were placed by respondents aged 30-49.

Participants who purchased on-demand deliveries were asked if they would have had to stop drinking alcohol had this service not been available, the results are displayed in Table 7.

Table 7: Proportion of respondents who would have had to stop drinking alcohol if the on-demand delivery service was not available (n=91)

	BOTTLE SHOP (% , N=44)	SPECIALISED FAST DELIVERY (% , N=47)	TOTAL (% , N=91)
No, I had other alcohol at home, I just wanted something else	36.4	21.3	28.6
No, I could have walked to the shop myself	31.8	40.4	36.3
No, I could have driven to the shop myself	20.5	12.8	16.5
No, someone else could have purchased the alcohol	13.6	12.8	13.2
Yes (I would have had to stop drinking alcohol)	18.2	36.2	27.5

More than a quarter (28 per cent) of respondents who received an on-demand order stated that they would have had to stop drinking alcohol if the delivery service was not available. This figure was higher for orders from specialised services (36 per cent) than from bottle shops (18 per cent).

Participants who ordered on-demand deliveries were asked how much alcohol they consumed on that occasion (Table 8).

Table 8: Proportion of respondents who consumed five or more standard drinks and 11 or more standard drinks on the same occasion as their on-demand alcohol delivery service purchase (n=91)

ON-DEMAND DELIVERY SERVICES	5+ STANDARD DRINKS	11+ STANDARD DRINKS
Bottle shop (n=44)	77.3%	36.4%
Specialised fast delivery (n=47)	61.7%	21.3%
Total (n=91)	69.2%	28.6%

Nearly 70 per cent of respondents drank five or more drinks on the same day they received their on-demand delivery, with over a quarter drinking 11 or more. Respondents ordering via bottle shops generally reported higher drinking levels.

On-demand vs other delivery services

In this last section, we compare respondents whose last order was an on-demand order with those whose last order was another service. Gender splits in our sample were fairly even for both on-demand (males = 51 per cent, females = 49 per cent) and other delivery services (males = 43 per cent, females = 56 per cent, other = 0.5 per cent). In contrast, there were marked age differences, with on-demand delivery users much more likely to be in the youngest age group than other delivery users (Table 9).

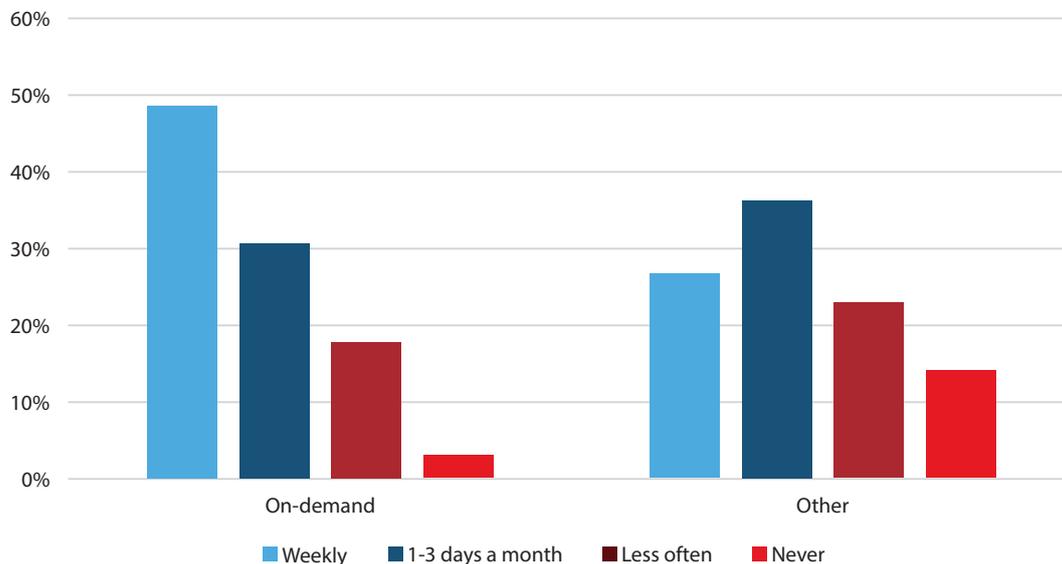
Table 9. Proportion of respondents aged 18-29, 30-49, and 50+ who purchased their last order through on-demand or other delivery services

ONLINE DELIVERY SERVICES	AGE RANGE		
	18-29	30-49	50+
On-demand (n=101)	55.4%	32.7%	11.9%
Other (n=398)	26.1%	36.4%	37.4%

We also looked at their general drinking patterns over the past year. The frequency of drinking five or more standard drinks in one occasion in the last 12 months is shown in Figure 5 for those who ordered via on-demand or other delivery services in their last order.

Figure 5. Proportion of respondents who consumed five or more standard drinks on one occasion in the last 12 months for on-demand (n=101) and other delivery (n=397) services.

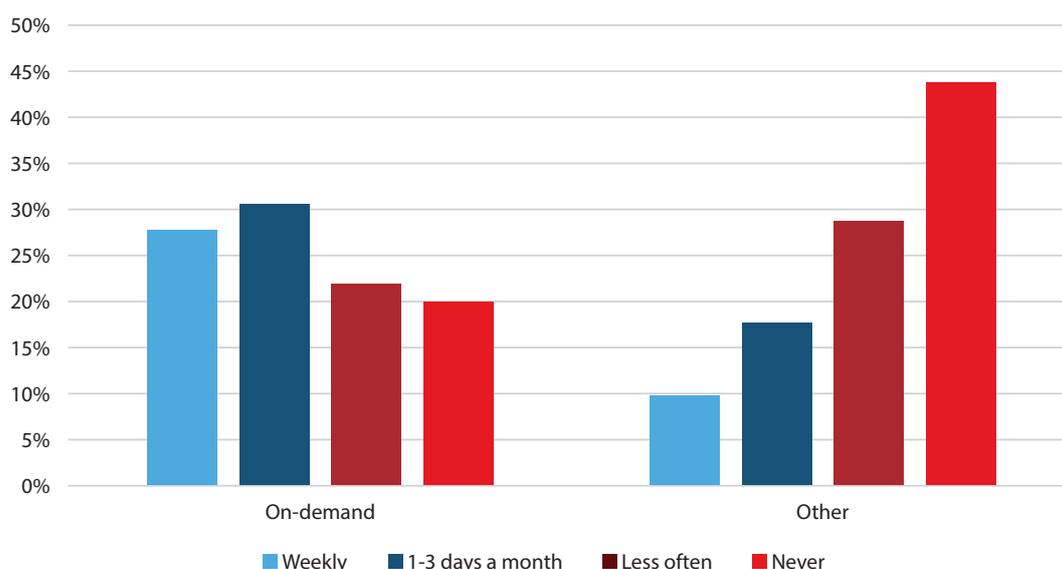
More than three-quarters (80 per cent) of respondents who ordered via on-demand delivery services reported consuming five or more standard drinks in one occasion at least monthly. Almost half (49 per cent) of the respondents who ordered via on-demand services reported consuming five or more standard drinks in one occasion at least weekly compared to one-



quarter (27 per cent) of respondents who ordered via other delivery services. These differences were even more skewed for our higher-threshold measure of risky drinking (Figure 6).

Figure 6. Proportion of respondents who consumed 11 or more standard drinks on one occasion in the last 12 months for on-demand (n=101) and other delivery (n=397) services.

More than half (59 per cent) of the respondents who ordered alcohol via on-demand delivery services reported consuming 11 or more standard drinks at least once a month in the past 12 months compared with 28 per cent of respondents who ordered via other delivery services.



Finally, Table 10 groups the earlier data on reasons given for using online delivery services (Table 4) into on-demand vs other orders.

Table 10: The reasons given by respondents for purchasing alcohol through on-demand and other delivery services (n=499)

	ON-DEMAND (N=101)	OTHER (N=398)
It was more convenient as the alcohol gets delivered straight to my front door	47.5%	26.4%
It was better value for money	8.9%	35.7%
I can't buy the alcohol products at my local bottle shop	4.0%	26.4%
It was cheaper to buy alcohol in bulk online	5.0%	21.4%
I am part of a delivery service wine club which provides me with discounts and other rewards	3.0%	19.8%
I didn't want to leave the house	26.7%	5.0%
It was faster to get alcohol delivered to my front door than to go and get it myself	21.8%	4.0%
I was over the blood alcohol limit to drive	21.8%	1.3%
There were no bottle shops close to where I live	8.9%	3.3%
I was out of alcohol and I wanted to keep drinking	13.9%	0.5%
I was ordering food and added alcohol to the order	6.9%	2.0%
Other (please specify)	6.9%	27.6%

Note: respondents selected all the reasons that applied to them, therefore the proportions will not add up to 100 per cent.

The most common reason for purchasing alcohol via an on-demand delivery service was the convenience of having the order delivered straight to their front door (47.5 per cent). In addition, not wanting to leave the house (26.7 per cent), speed of delivery (21.8 per cent), being over the blood alcohol limit to drive (21.8 per cent), being out of alcohol and wanting to keep drinking (13.9 per cent) were more commonly selected as reasons for ordering via on-demand compared to other delivery services. Meanwhile financial reasons (better value for money (35.7 per cent), cheaper to buy alcohol in bulk online (21.4 per cent), and part of a delivery service wine club which provides me with discounts and other rewards (19.8 per cent); and variety (unable to purchase the alcohol product at my local bottle shop (26.4 per cent) were most commonly chosen as reasons for ordering via other delivery services.

Discussion

Our results show that there is a wide range of people using online alcohol delivery services and that these services fill different niches in the alcohol market. Services include, for example, wine clubs, which are used to buy large amounts of alcohol by older respondents who want to buy from particular wineries. On the other hand, there were people ordering alcohol to be delivered quickly (<two hours) from either bottle shops or specialised fast delivery services. These people tend to be younger, more likely to engage in heavy episodic drinking and often report that the delivery enabled them to continue drinking when they would otherwise have had to stop. The findings make it clear that online delivery services are disparate and that regulators and policymakers need to consider the diversity of practices broadly categorised as alcohol delivery services.

These varying services and clientele clearly present different issues in terms of risk and regulation. In particular, our findings suggest on-demand delivery services are likely to be a particular concern for acute harms, as they are often associated with (and directly facilitate) heavy drinking occasions.

There are broader regulation questions raised by our data. For example, more than one third (36 per cent) of our respondents who were aged under 25 reported either receiving delivery of alcohol without having their IDs checked or having alcohol delivered while they weren't present. Future research is needed to assess whether these services are accessible to underage drinkers and to ensure appropriate regulatory systems are in place to prevent delivery to underage drinkers. Researchers have used underage or underage-looking purchasers to test compliance with minimum purchase age regulations in conventional alcohol outlets¹⁵ and a similar trial for home-delivered alcohol would be valuable. We did not directly assess the intoxication of respondents collecting alcohol, but regulatory issues remain significant in this space - the finding that 14 per cent of people who received an on-demand delivery in their last online order did so because they had run out of alcohol and wanted to continue drinking is relevant here. How Responsible Service of Alcohol (RSA) practices are embedded in the delivery space remains unclear and the recent industry code of conduct has significant shortcomings.

It should be noted that there remains a lack of evidence linking the rise of online delivery services to specific increases in alcohol consumption or related harms. However, the proportion of sales facilitated through online delivery is forecast to grow swiftly. Results here demonstrate the potential for specific risks associated with the increase in delivery services - especially on-demand delivery services. Monitoring of the methods that respondents use to purchase alcohol online with more representative samples is recommended.

Our study is an exploratory examination of online alcohol delivery services, based on a self-selected sample of people who use them. The data presented should not be interpreted as population prevalence estimates, but do provide important information on the ways in which these services are being used. We know from population studies and industry analyses that both the prevalence of use and market share are increasing^{2,4} and ongoing research into the impact of online delivery services of consumption and harm is necessary.

With the proportion of online alcohol sales in Australia increasing and with expectations of future growth, work is required to ensure that regulation is keeping up with these shifts. Our data suggests that a significant minority of people are using online sales for their regular alcohol purchases. More importantly, risky drinkers are using on-demand delivery services to prolong their drinking occasions. There is an urgent need for regulators to ensure that licensing regimes and enforcement practices are appropriate to these services. This is particularly important before these services become completely embedded in existing systems that have been designed around place-based alcohol outlets. There are also significant research opportunities in this space to further our understanding of the potential risks of this diverse and fast-growing component of the alcohol market in Australia.

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