Joe Berry Award Essay 2019

Topic 5 - The Future of Brands in a Differentiated Market

Q. The position of branded goods within the Australian retail market is blurred and pseudo brands may own the future. Unconsidered hidden cost and risk are possibilities for retailers that pursue private label growth, while brand decline may be due to a forced reduction in consumer options.

Can brands successfully differentiate in a market with multiple own-label tiers and pseudo-brands?

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JBA-19-082

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EXECUTIVE SUMMARY

Private Label poses an increasing threat to FMCG supplier brands in Australia as ALDI gains popularity and rival supermarkets react with an enhanced offering.

This essay argues that the risk to suppliers is not necessarily pseudo-brands, but rather an increased focus on Private Label quality at a product level combined with emotional brand-building at a master-brand (e.g. ALDI – Good Different) level.

Today, to differentiate brands need to emotionally and authentically connect with consumers, which is challenging.

One potential strategy put forward in this essay for supplier brands to differentiate and disrupt is a focus on plastic reduction. This would allow certain brands to authentically emotionally brand-build, save cost and potentially generate new revenue streams.

INTRODUCTION

Private Label is disrupting the Australian grocery market. FMCG supplier brands can still successfully differentiate but may also need to disrupt.

There is a perfect storm of ALDI 'normalising' Private Label for consumers and Australian retailers fighting back with an enhanced Private Label offering to improve their value equation, their margin and differentiate.

Private Label can take different forms, but the distinction between multiple tiers and pseudo-brands is something of a distraction – the key is that in most cases (excluding some pseudo-brands) Private Label benefits from being part of the 'master brand' (e.g. Woolworths the Fresh Food People), and taps into that brand equity.

Exploring the strategy of branding further, the meaning of 'brand' and how consumers interact with brands has shifted; today's consumers expect more.

To reach consumers and differentiate brands increasingly need to emotionally connect. The challenge is that this emotional brand-building needs to be authentic.

In order to be authentic and successfully brand-build, supplier brands need to tap into part of the zeitgeist they can legitimately own. There are various ways to achieve this, but one approach relevant both now and in the future is the shift to plastic reduction.

THE RISE OF PRIVATE LABEL

Over the past decade Private Label has grown from c.15% of grocery sales to 23% in Australia[1]; and is now a core part of the grocery basket. This trajectory shows no signs of slowing; across Q4 of 2018 Private Label grew at 3 times the rate of total market[2].

Although a big leap, Australia has not yet caught up with comparable markets – Private Label contributed 41% to grocery sales in the UK in 2016, 27% in The Netherlands and 26% in France[3].

This section will focus on drivers of this growth, why it will continue, and therefore why Australian suppliers should be concerned.

In one word, ALDI. Over the last 18 years ALDI has disrupted consumer behaviour and local retailer strategy.

ALDI often apes leading brands, sometimes very closely, sometimes leading to legal action[4]. However, ALDI is upfront about this ('*like* brands, only cheaper'[5]), and the pseudo vs 'real' angle is frequently referenced by one of Australia's biggest news website[6]. Today's connected consumer has enough information to recognise that ALDI predominantly sells 'Private Label', rather than unfamiliar brands.

ALDI's brand promise is the value equation of quality at low prices, backed up by awards won across key destination categories such as wine, cheese and meat[7]. This has been successful; their Australian market share is at an all-time high[8]. As more of Australia shop in ALDI, it normalises Private Label.

ALDI's approach has worked because Private Label is (generally) cheaper than comparable brands[9]. When you shop in ALDI – filling your basket with Private Label – your total shop is noticeably cheaper than your till-receipt from Woolworths/Coles/IGA, filled with brands. You might not find your favourite peanut butter at ALDI, but at a time when households are under financial pressure[10] and groceries are a large out-going, ALDI feels like the smart choice for many.

In order for rival supermarkets to protect consumers switching spend to ALDI, they also need to provide the option to fill baskets with cheaper – but good quality – products. Over the last few years Coles and Woolworths have focused on quality and

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[1] Nielsen Australia Homescan Panel
[2] Nielsen Australia Homescan Panel – 13 weeks ending 29th December 2018 vs year ago
[3] The Rise and Rise Again of Private Label, Nielsen Global Thought Leadership, 2018
[4] https://theconversation.com/copycat-products-living-dangerously-with-intellectual-property-92540
[5] https://www.marketingweek.com/2018/06/15/aldi-like-brands/
[6] https://www.dailymail.co.uk/femail/article-5660963/Aldi-takes-cult-beauty-brand-Urban-Decay-copycat-palettes.html
[7] https://www.aldi.com.au/
[8] Nielsen Homescan Panel – 13 weeks ending 29th December 2018 vs year ago
[9] The Rise and Rise Again of Private Label, Nielsen Global Thought Leadership, 2018
[10] https://www.theguardian.com/australia-news/2019/feb/21/reserve-bank-will-cut-rates-twice-in-2019-westpac-chief-economist-says

range[11], and Metcash successfully launched a new mid-tier Private Label brand[12]. Coles openly subscribe to this philosophy; aiming to increase their Private Label share of sales from 28% to 40% over the next 5 years[13].

Mindsets have not just changed in relation to Private Label – what consumers expect from brands is shifting.

WHAT CONSUMERS EXPECT FROM BRANDS IN 2019

This section will focus on what it takes for FMCG brands to differentiate and succeed in 2019. To answer this, the words 'differentiation' and 'brand' will be unpacked, then Gillette used as a case study for how and why brands are evolving and the risk attached.

Given Ehrenberg-Bass's popularity, it would be remiss to not acknowledge that Sharp argues 'rather than striving for meaningful, perceived differentiation, marketers should seek meaningless distinctiveness. Branding lasts differentiation doesn't'[14]. For the purposes of this essay, differentiation and distinctiveness are interchangeable, but the key takeout is this; branding is even more important today.

'Brand' is widely used, not always straightforward to define[15]. The 'Father of Advertising', David Ogilvy, defines it as 'the intangible sum of a product's attributes: its name, packaging, and price, its history, its reputation, and the way it's advertised'[16]. Using that definition in this context, a brand is typically its own entity (Gillette) sitting within an umbrella of a manufacturer (P&G). The manufacturer and the brand can be one entity (Halo Top) – aka a niche brand – but this is less common, for now. As seen, retailers are increasingly creating their own brands. Finally, a retailer itself – bricks + mortar and/or online – is also a brand.

This definition has evolved. Branding guru Wally Olins claims brands create 'belonging to a tribe, to a religion, to a family. Branding demonstrates that sense of belonging'[17]. Humans are not rational. We are inherently tribal, with an innate desire to be perceived well by others in our tribe in order to get ahead[18]. Brands can provide the 'right' cues to our tribe[19].

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[11] http://www.ausfoodnews.com.au/2017/06/14/woolworths-overhauls-its-private-label-foods.html
[12] https://communityco.com.au/
[13] https://www.afr.com/business/retail/coles-managing-director-defends-private-label-strategy-20180618-h11in6
[14] Sharp, B. (2014) *How Brands Grow: What Marketers Don't Know*, Oxford
[15] https://www.forbes.com/sites/jerrymclaughlin/2011/12/21/what-is-a-brand-anyway/#4669803a2a1b
[16] Ogilvy, D. (2007) *Ogilvy on Advertising*, Carlton Books Ltd
[17] Johnson, M. (2016) *Branding in 5 and a Half Steps*, Thames & Hudson Ltd
[18] Storr, W (2017) *Selfie*, Pan MacMillan
[19] Sharp, B. (2014) *How Brands Grow: What Marketers Don't Know*, Oxford

To succeed through reaching your tribe and extracting long-term profitability from them, companies need to emotionally brand-build[20].

Brand-building is about 'increasing a consumer's mental availability for your brand' and with 'sales activation' (e.g. promotional activity) is the marketing activity required to drive brand growth[21]. Like Sharp, Binet & Field argue that whilst sales activation is important, brand-building should be the focus as it creates more profitable, longer-term growth[22].

Brand-building requires a focus on emotional (vs rational) advertising[23]. 'Campaigns in the IPA's Databank that declared to use an 'emotional' strategy by their authors are nearly twice as likely to report very large profit gains over the long term as those that do not'[24].

However, emotionally connecting with consumers is not straightforward. Today's consumers do not want 'corporate neutrality'[25] they want brands to stand for something. That something needs to be authentic; 'in today's world, the lines between citizens and consumers, beliefs and brands, are blurring. Companies today are expected to align with their values in word and deed'[26].

This might sound a stretch for producers and purveyors of baked beans, but already this year P&G have attempted to tie this together with 'The Best a Man Can Get' campaign[27]. On some level it already succeeded – commentators and social media users quickly came out to demonstrate which 'tribe' they belonged to.

The campaign stood for something ('Times Up') and attempted to emotionally connect with the brand audience, but arguably lacked authenticity given P&G's women's tax[28]. Focusing in on FMCG, there is a sliding-scale of Kendal Jenner x Pepsi (universally derided)[29] to Dove Campaign for Real Beauty (the gold-standard)[30] – and P&G was dangerously close to Kendal territory. It is yet to be seen overall where the campaign landed.

The reasons why P&G felt compelled to emotionally brand-build are also important. Gillette is under pressure from two of the big macro disrupters – 'digital native' brands

[20] Marketing from the heart for growth, Market Leader, Quarter 2, 2017, WARC, 2017
[21] https://www.cmo.com.au/article/646133/binet-digital-has-skewed-marketers-too-far-into-sales-driven-advertising/
[22] https://www.cmo.com.au/article/646133/binet-digital-has-skewed-marketers-too-far-into-sales-driven-advertising/
[23] https://www.cmo.com.au/article/646133/binet-digital-has-skewed-marketers-too-far-into-sales-driven-advertising/
[24] Marketing from the heart for growth, Market Leader, Quarter 2, 2017, WARC, 2017. IPA = Institute of Practitioners of Advertising
[25] https://theconversation.com/woke-washing-what-happens-when-marketing-communications-dont-match-corporate-practice-108035
[26] Tackling the Heart of Socially Charged Advertising, Nielsen, 2018
[27] https://www.youtube.com/watch?v=koPmuEyP3a0
[28] http://theconversation.com/post-gillette-other-brands-are-better-at-matching-practice-with-talk-but-dont-get-the-publicity-110595
[29] https://www.youtube.com/watch?v=bTivpgMkGKA
[30] https://en.m.wikipedia.org/wiki/Dove_Campaign_for_Real_Beauty

such as Dollar Shave Club (interestingly now owned by Unilever)[31], and Private Label razors from US retailers Sam's Club and Costco[32]. These are pressures now being felt by Australian suppliers.

In an added challenge for suppliers, Private Label is benefitting from emotional brand-building. On buying a block of 'Woolworths' Cheese, the brand equity is not (just) in the mid-tier 'Woolworths' brand, it's in the entire 'Woolworths the Fresh Food People' master-brand.

Woolworths is one of the top advertisers in Australia[33] and since 2016 has moved away from price-based messaging with their Christmas 2018 ad focused on 'families'[34].

ALDI is the most trusted brand in Australia[35]. What is working is the link between brand-building and delivering on brand promises; in 2018 ALDI/BMF won 'Best Ad Campaign' for Good Different[36].

In summary, retailer emotional brand-building plus increased investment in the quality of Private Label puts extra pressure on suppliers to differentiate.

[31] https://www.forbes.com/sites/nikkibaird/2019/01/28/when-brands-take-a-stand-a-checklist/
[32] https://www.businessinsider.com.au/costco-sells-kirkland-signature-razors-2018-5?r=US&IR=T
[33] Nielsen Media
[34] https://mumbrella.com.au/woolies-marketer-says-refresh-380223; http://www.adnews.com.au/news/family-and-food-the-focus-of-woolworths-2018-christmas-ad
[35] https://www.smh.com.au/business/consumer-affairs/aldi-is-australia-s-most-trusted-brand-as-banks-drop-in-favour-20181121-p50hay.html
[36] http://www.bmf.com.au/news?guid=ae391107-42a0-494b-93dd-dba0f9f8d8ba

A STRATEGY FOR BRANDS TO SUCCESSFULLY DIFFERENTIATE IN THE AUSTRALIAN MARKET

To answer *if* supplier brands can successfully differentiate, we need to consider *how*. It will be challenging; we are in the middle of disruption (Private Label, e-commerce) in a low growth market[37].

As outlined, in order to differentiate, brands increasingly need to emotionally brand-build and ideally disrupt – once tapped into the zeitgeist, brand consultants 'should be provoking people to think about how to do things in a new or a better way'[38].

Nike achieved this with their 'Black Lives Matter' supporting, Colin Kaepernick fronted, campaign[39]. However, this is fraught with risk (see Pepsi). Therefore suppliers need to tap into something they can authentically own.

There are numerous trends to tap into; one example is environmental sustainability. Through tapping into this, (some) suppliers could emotionally connect with consumers, differentiate their brand and product, ultimately leading to growth.

In 2018 81% of global respondents surveyed stated they 'feel strongly that (FMCG) companies should help improve the environment', driven by younger generations (Millennials, Gen Z/X) – i.e. the shopper of the future[40].

It was more important for consumers in emerging markets with many 'dealing with environmental hazards in their everyday lives' and therefore it is 'no surprise that these consumers are more demanding of companies'[41]. As environmental degradation accelerates in Australia (e.g. coral reef) environmental sustainability is likely to be given even more focus (e.g. Adani Protest).

Environmental sustainability is not new news, but has evolved. There are various strands, but the pivot away from plastic recycling to reduction is currently gaining traction in Australia, and something some suppliers could 'own'. Plastic 'single-use' was the Collins Dictionary word of the year in 2018, and as said in the Sydney Morning Herald, 'plastic is out of fashion'[42].

The Australian FMCG industry took a step forward in 2018 with the ban of single-use plastic bags, arguably putting retailers ahead in terms of brand-building in this space. Woolworths charged for bags but Coles gave them away for free, which provoked

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[37] Nielsen Retail Landscape 2018; Nielsen Homescan Panel
[38] Millman, D. (2013) *Brand Thinking and Other Noble Pursuits*, Allworth
[39] https://theconversation.com/woke-washing-what-happens-when-marketing-communications-dont-match-corporate-practice-108035
[40] Global Sustainable Shoppers Report, Nielsen Global Thought Leadership, 2018
[41] Global Sustainable Shoppers Report, Nielsen Global Thought Leadership, 2018
[42] https://www.smh.com.au/lifestyle/beauty/the-new-frontier-in-environmentally-friendly-makeup-20180702-p4zoy4.html

criticism from Greenpeace[43]. Whilst this may be entirely coincidental, Woolworths growth has continued to outstrip Coles[44].

Added to this, Australian consumers may soon realise that supplier packaging is the largest overall contributor to plastic production/use[45]. Jeff Bezos/Amazon is already being petitioned[46]; FMCG suppliers could become social/mass media targets for change given several are bigger in GDP terms than some countries[47].

Suppliers do not need to start from scratch. To conclude, one area of the industry will be focused on to highlight steps already being made.

The Health + Beauty industry is seeing the start of a shift to general environmental sustainability as a point of differentiation. From a retailer perspective the Body Shop has long made ethics/sustainability a point of differentiation, but arguably allowed Lush to over-take and experience strong growth since Body Shop was sold to L'Oréal[48].

In the supplier world, Simple – the UK's biggest facial cleansing wipe brand (owned by Unilever) – introduced a bio-degradable version in 2018, and has pledged that by 2020 all will follow suit[49]. Closer to home there is an increasing focus on sunscreen which does not harm coral reefs[50].

Focusing on plastic, cosmetics giant MAC encourages recycling[51], high-end perfume brand Le Labo encourages re-using packaging[52], and mid-tier brand Lush provides packaging-free shampoo.

A standout brand is Ren – a UK cosmetics brand who partnered with activist-network 'Surfrider Foundation' to 'take plastics out of the ocean' – their brand promise is; 'we develop products to help the skin help itself while working to reduce our impact on the planet'[53] Since 2015 Ren has been owned by Unilever.

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[43] https://www.theguardian.com/business/2018/aug/01/coles-backflips-on-banning-free-plastic-bags
[44] Nielsen Homescan Panel
[45] Global Sustainable Shoppers Report, Nielsen Global Thought Leadership, 2018
[46] https://www.washingtonpost.com/technology/2019/02/11/why-amazons-new-streamlined-packaging-is-jamming-up-recycling-centers/?noredirect=on&utm_term=.61fcd36f3552
[47] https://www.businessinsider.com/25-giant-companies-that-earn-more-than-entire-countries-2018-7/?r=AU&IR=T/#spotifys-revenues-in-2017-exceeded-mauritanias-gdp-1
[48] https://www.theguardian.com/money/poll/2011/nov/25/store-wars-body-shop-lush; https://www.forbes.com/sites/walterloeb/2017/04/07/lush-beauty-taking-the-industry-by-storm-thanks-to-young-love/#2925780311c5
[49] https://www.theguardian.com/fashion/2018/nov/03/best-new-ethical-products
[50] https://www.nationalgeographic.com.au/australia/here-are-some-alternatives-to-reef-damaging-sunscreen.aspx
[51] https://www.maccosmetics.com.au/
[52] https://www.refinery29.com/en-gb/refillable-products#slide-2
[53] https://www.renskincare.com/pages/takeaction

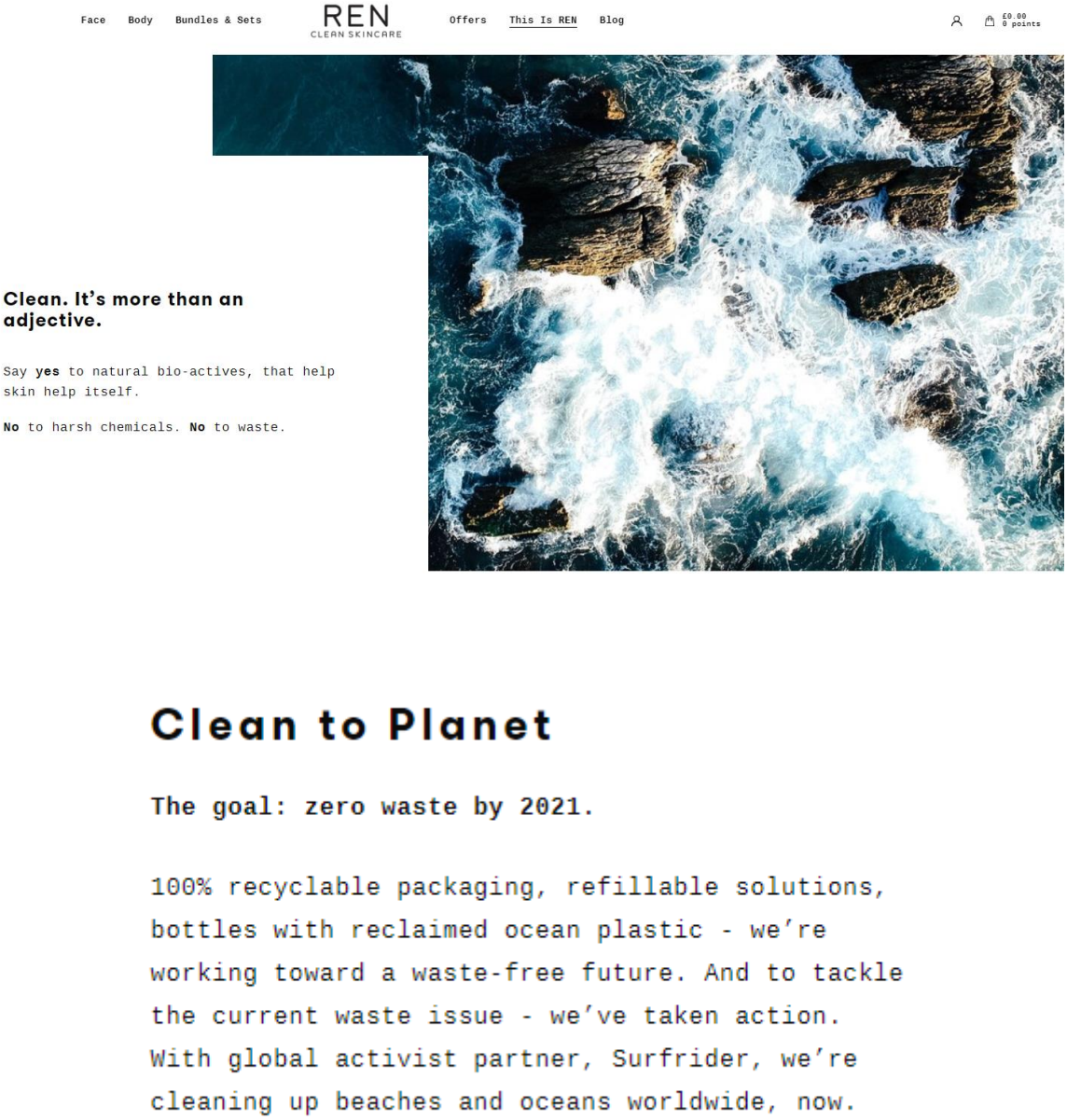

Figure 1: Ren Website

Suppliers could use a focus on plastic reduction to disrupt the market, in three ways. Firstly although potentially hitting short-term profit, a 'quick fix' could be a move to larger pack-sizes. This also locks consumers into your brand for longer, and potentially reduces manufacturing costs. Secondly bio-packaging; demonstrating the brand is walking the walk as well as talking the talk. Thirdly; re-usable packaging – which could create its own industry(s) and revenue, as well as reducing costs.

For example, glass bottles to take to Woolworths to re-fill your Sunsilk in, Omo sent in returnable tubs from Amazon, bars of Dove sent straight from factory to home in cardboard boxes.

This is one of many disrupter's suppliers could use to differentiate and dip their toe into in a way which Australian supermarkets are not set up or positioned to do, yet.

CONCLUSION

Private Label is an increasing threat for FMCG supplier brands, but brands can still successfully differentiate and grow. This will require increased focus on emotional brand-building – to differentiate (from Private Label and other suppliers) brands need to connect with consumers.

This requires new ways of thinking and disrupting; in a changing world, consumers are increasingly expecting more from big brands – be they sports-clothing, retailers or FMCG suppliers.

One potential solution (of many) is a focus on plastic reduction. Whilst it has a benefit for society, it could also provide a commercial advantage for those suppliers who can authentically own this space through a means of emotional brand-building, creating new revenue streams and cost savings.

Joe Berry Award Essay 2019

Topic 5 – The Future of Brands in a Differentiated Market

Q. The position of branded goods within the Australian retail market is blurred and pseudo brands may own the future. Unconsidered hidden cost and risk are possibilities for retailers that pursue private label growth, while brand decline may be due to a forced reduction in consumer options. Can brands successfully differentiate in a market with multiple own-label tiers and pseudo-brands?

Entrant Number: JBA-19-056

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Executive Summary

From imitator to disruptor, from private label to pseudo-brands that are not necessarily seen as such - over the last few decades private label virtues have come a long way. But despite the prominent growth, the strategy of growing private label might be very dangerous for retailers.

This essay evaluates unconsidered hidden risks for retailers that pursue private label growth. These are:

- Misalignment with customer needs;
- Ignoring a big shopper group not interested in private label;
- Inability to grow mental and physical availability of private label products.

This essay concludes that there is a big role for brands, and brands can successfully differentiate in a market with multiple own-label tiers and pseudo-brands by focusing on these three areas:

- Being fast to tap into emerging consumer needs;
- Being fast to embrace social media marketing;
- Being fast and creative with product activation in stores.

This essay sets out the future state of retail, specifically:

- New customer-centric framework for supplier-retailer partnership;
- New model of assessing customer needs;
- New model of optimal product range;
- New profit sharing model between supplier and retailer.

Retailers and suppliers need to consider implementing this new partnership model, until customers fully switch to alternative channels that better cater to customers' needs.

Introduction

Proliferation of private label all over the world, its appeal to ever increasing number of consumers and significant headroom to grow across most markets are evident and can't be ignored.

However, this essay argues that retailers have significant limitations and barriers to grow their private label products, coupled with the lack of expertise in marketing brands: the area where retailers are traditionally very reliant on suppliers marketing to consumers.

The incentive for retailers to invest in own product lines is clear: having very thin profit margins, private labels allow retailers to price their products more competitively and keep the profits[54]. But the flipside of private label expansion, which will be uncovered in this essay, questions the correctness of this strategy.

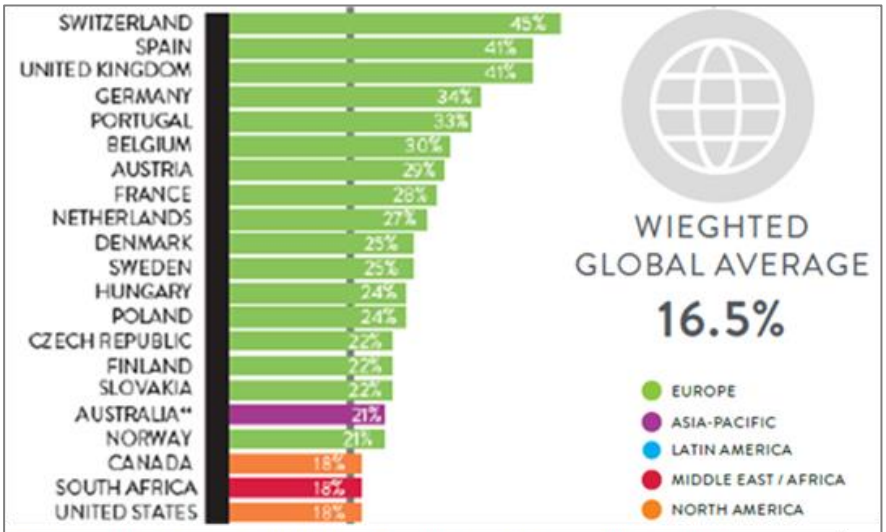
[54] https://www.cbinsights.com/research/private-labels-disrupt-cpg-retail/

1. Private label outlook

Australian Retail is a $320B industry[55] with roughly one out of five dollars sales coming from private label[56]. Clear price advantage of private label compared to branded products is appealing to Australian consumers, some of which are struggling to make ends meet and looking for cost savings due to rapidly growing energy and petrol prices that are now among the highest in the world[57]. This coupled with “extremely elevated” levels of household debt that hit nearly 200%[58].

The rise of pseudo-brands and the growth of ALDI in the Australian market have also helped to change the way shoppers percieve private label products. As shoppers now can’t easily differentiate between retailers private labels and proprietory branded products, arguably the biggest barrier to purchase private label – lower quality perception – has now been eliminated[59].

While it’s hard to estimate the market share that private label can reach in the Australian market in the next 5-10 years, benchmarking against other world economies might suggest that opportunities and headroom for growth do exist[60].



Source: 'The state of private label around the world' Report, Nielsen 2014, https://www.nielsen.com/content/dam/nielsenglobal/kr/docs/global-report/2014/Nielsen%20Global%20Private%20Label%20Report%20November%202014.pdf

Figure 1: Private label dollars share by country

[55] http://stat.data.abs.gov.au/Index.aspx?DataSetCode=RT

[56] https://www.iriworldwide.com/IRI/media/IRI_Private%20label-white-paper-au.pdf

[57] https://www.power-technology.com/features/australia-energy-prices/

[58] https://www.abc.net.au/news/2018-01-18/household-debt-extremely-elevated-and-tipped-to-grow/9340880

[59] https://theconversation.com/phantom-brands-haunting-our-supermarket-shelves-as-home-brand-in-disguise-67774

[60] https://www.nielsen.com/content/dam/nielsenglobal/kr/docs/global-report/2014/Nielsen%20Global%20Private%20Label%20Report%20November%202014.pdf

2. Why consumer attitudes have changed?

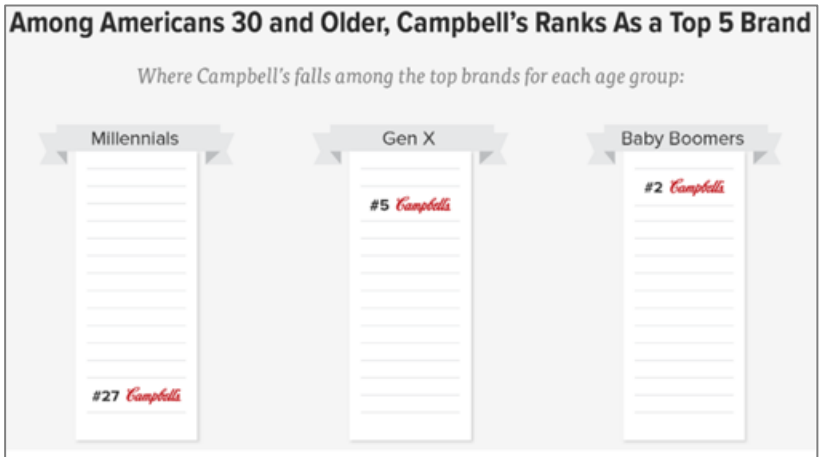
The strategy of branding is not working as it used to because our modern life is increasingly complex and the average attention span of human is now only 8.5 seconds[61]. Which means that consumers are now less engaged.

There are three key reasons why consumer attitudes have changed:

- Generational factor;
- The rise of social media;
- The law of product usage.

2.1. Generational factor.

Millenials are now representing 2bn of the world population and they have a completely different set of values compared to the previous generations. They want commited brands with authentic products. Brands that are natural, simpler, more local and if possible small. Moreover, if and when a big brand tries to dress up differently, consumers disassociate and don't engage[62]. So for the brands with long history, finding ways to appeal to a younger generation authentically is no-easy task[63].



Source: 'America's Most Loved Brands' Report, Morning consult 2017, https://morningconsult.com/2017/05/02/campbell-soups-age-problem/

Figure 2: Net favourability of the same brand across generations

However, consumers search for authenticity mostly leads them to smaller brands and local suppliers, not to private label products.

[61] https://ogilvy.co.uk/news/how-brands-win-age-complexity

[62] https://www.ft.com/content/09271178-6f29-11e8-92d3-6c13e5c92914

[63] https://morningconsult.com/2017/05/02/campbell-soups-age-problem/

2.2. The rise of social media

Driving the change, even more than the buying habits of millenial consumers, is the rise of digital technology. With almost 2.5bn active social media users around the globe[64], it has become essential for every business to create social media plans as part of their larger marketing strategy[65].

Big brands are slow to adapt and evolve which leads to them falling behind smaller, more agile companies. Now companies don't need a huge marketing budget to persuade large grocery stores to stock its products. Social media eroded the barriers[66] and gave opportunity to smaller companies to reach and interact with consumers in more personal, authentic ways.

However, social media is arguably the tool that is largely unavailable for retailers to use in order to promote their private label products. The reason for that is an inherent risk that shoppers may feel duped by retailers into buying a brand, which is not really a brand[67]. In the Australian market, where competitive retailers are usually located within 10 minutes drive from each, losing consumers trust might mean losing some shoppers for good.

2.3. The law of product usage

The third reason can be explained by the law of product usage. This law explains that, contrary to the popular belief, product usage drives attitude and not the other way around[68].

In other words, positive changes in consumer attitudes towards private label products can be explained by the diagram below:

Source: based on personal research, learnings from the book 'How brands grow', and consultations with industry experts

Figure 3: Private label adoption cycle

[64] https://www.statista.com/topics/1164/social-networks/

[65] https://www.attorney-cpa.com/articles/rise-social-media-marketing/

[66] https://www.ft.com/content/09271178-6f29-11e8-92d3-6c13e5c92914

[67] https://theconversation.com/phantom-brands-haunting-our-supermarket-shelves-as-home-brand-in-disguise-67774

[68] Sharp, B 2010, 'How brands grow: what marketers don't know', Oxford University Press, p.66

But while this might sound promissing for retailers pursuing private label growth, in fact this law demonstrates limitations associated with such strategy which will be explored next.

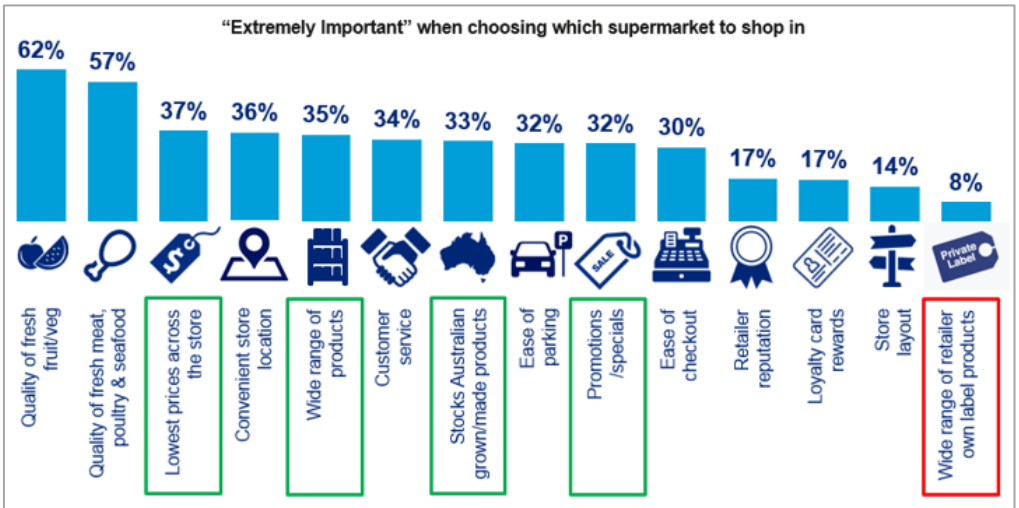
3. Unconsidered hidden risks for retailers pursuing own label growth.

Three key unconsidered risks are:

- Misalignment with customer needs;
- Ignoring a big shopper group not interested in private label;
- Inability to grow mental and physical availability of private label products.

3.1. Misalignment with customer needs.

It's understandable why retailers would want to wean people off of branded goods and onto retailers' own product lines: from private label sales, retailers can make margins 25-30% higher than from manufacturer brands[69]. However, this strategy can not be further away from meeting customer needs. In this recent survey, customers ranked 'wide range of retailer own label products' as the least important factor when choosing which supermarket to shop in[70]



Source: 'IRI Grocery Market Moves 2017' Report

Figure 4: Most important factors when choosing which supermarket to shop in

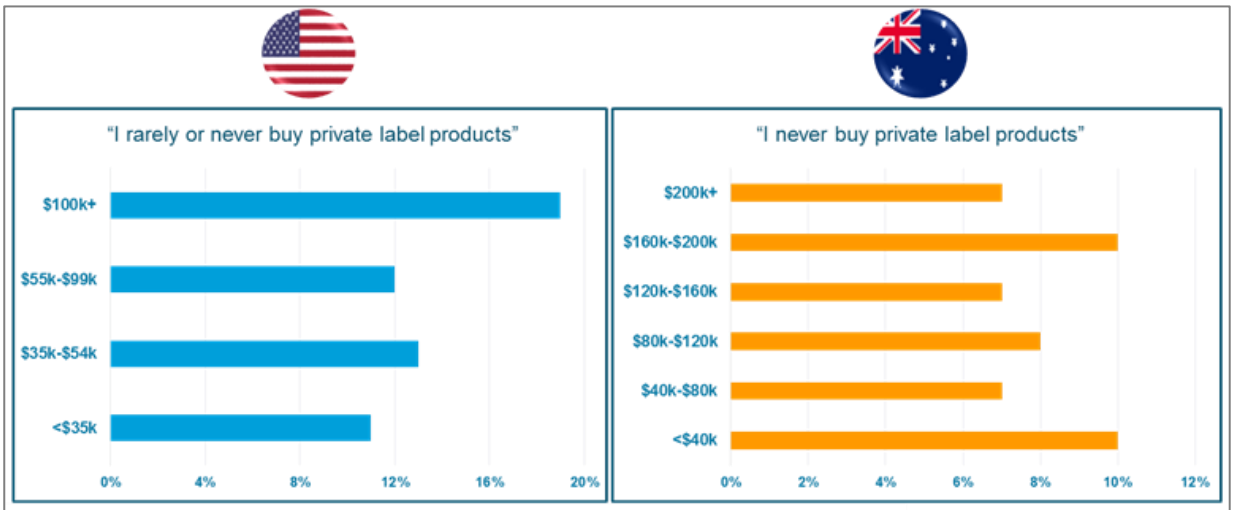
Four out of the top ten factors highlighted in green would be advantageously addressed by collaborating with suppliers of branded products.

[69] https://www.cbinsights.com/research/private-labels-disrupt-cpg-retail/

[70] 'IRI Grocery Market Moves 2017' Report

3.2. Ignoring a big shopper group not interested in private label.

There is a significant proportion of people who claim that they rarely or never buy private label products. And the propensity towards this behaviour usually grows with the level of income[71]:



Source: 'Private Label 2017' Report, IRI US; 'Survey to the Shopper Panel 2019', IRI AUS

Figure 5: Attitudes towards private label products

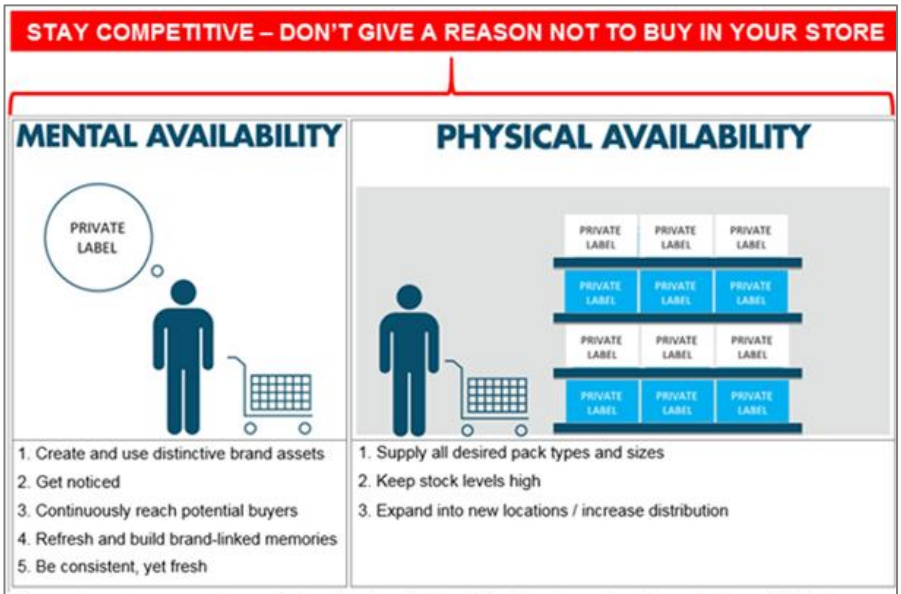
Giving opportunity to the group of people with the highest purchase power to not shop in your stores is arguably a questionable strategy.

[71] 'Private Label 2017' Report, IRI US; and 'Survey to the Shopper Panel 2019', IRI AUS

3.3. Inability to grow mental and physical availability of private label products.

The key marketing task of brand's growth is to make a brand easy to buy; this requires building mental and physical availability. Building mental availability requires distinctiveness and clear branding. Building physical availability requires breadth and depth of distribution[72].

Retailers pursuing private label growth need to follow the same rules of brand building as suppliers do:

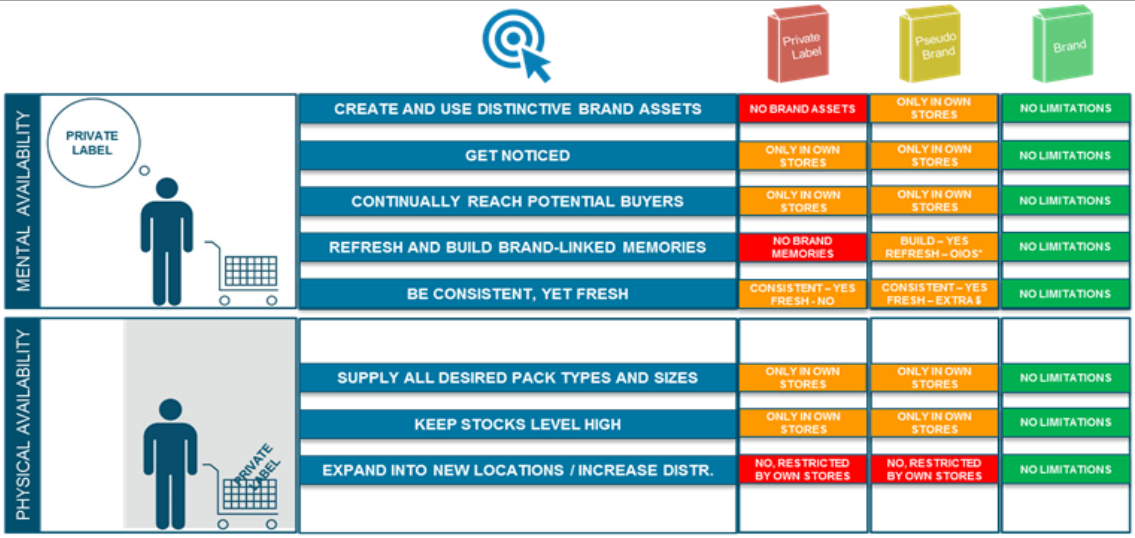


Source: based on personal research, learnings from the book 'How brands grow', and consultations with industry experts. Pictures taken and adapted from https://blog.percolate.com/2015/10/the-secret-to-brand-growth-mental-and-physical-availability/#

Figure 6: Framework of brands growth

[72] Sharp, B 2010, 'How brands grow: what marketers don't know', Oxford University Press, p.180

Using the framework above, I have assessed and summarized all the limitations and barriers for retailers to grow their private label products:

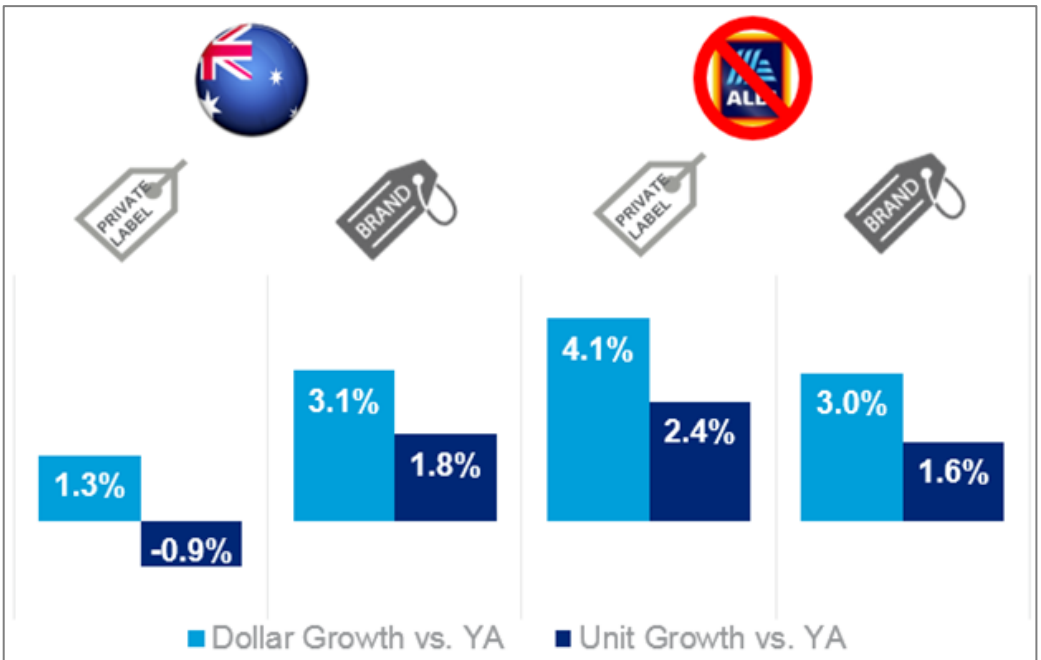


Source: based on personal research, learnings from the book 'How brands grow', and consultations with industry experts.

Figure 7: Unconsidered limitations of growing private label products *OIOS - only in own

The biggest barrier for retailers pursuing private label growth is that distribution is limited to their own stores. Due to this, retailers' ability to influence shoppers will always be limited to the time when shoppers are in store. Above the line marketing initiatives will be very costly and mostly wasted as all shoppers shop across different retailers and are not loyal to one specific retailer. The significance of this cross-shopping behaviour is huge. Consider an example from the grocery market: despite duopoly, neither Coles nor Woolworths have over 45% share of their shoppers' wallet[73]. In other words, Coles and Woolworths shoppers spend over 55% of their total grocery spend outside of their primary retailer. With this level of cross-shop, focusing on private label growth means giving your shoppers strong reason not to buy in your store.

[73] 'IRI Grocery Market Moves 2017' Report



Source: 'IRI Grocery Market Moves 2018' Report

Figure 8: Performance of branded products vs private label in grocery channel

4. <u>Can brands successfully differentiate in a market with multiple own-label tiers and pseudo-brands?</u>

Brands absolutely can and are differentiating in a market with multiple private label offers. In France, share of private label is above 30% but is declining consistently during the last four years due to price war led by national brands[74]. In the USA, share of private label has stayed almost the same for 35 years: 17%[75] in 1981 vs 17.7% in 2016[76]. In Australia, brands this year outgrowing private label in grocery channel due to slowdown in ALDI's performance[77].

[74] 'IRI Private Label in Western Economies 2018' Report

[75] https://hbr.org/1996/01/brands-versus-private-labels-fighting-to-win

[76] https://www.nielsen.com/content/dam/nielsenglobal/ru/docs/2018.02%20-%20Global%20-%20The%20Rise%20and%20Rise%20Again%20of%20Private%20Label.pdf

[77] 'IRI Grocery Market Moves 2018' Report

Source: 'IRI New Product Pacesetters 2018' Report

Figure 9: Top growing brands across four key retail channels (52.4% of total Australian retail sales)

However, it's quite clear that the wind of change is ripping through the consumer industries. For decades, 'big meant better' and consumers trusted brands they knew[78]. This time has passed. Now it's not 'the big that eat the small', it's 'the fast that eat the slow'. Size is no longer the real distinguishing factor, speed of execution is[79].

Successful manufacturers have focused on differentiating themselves by being fast in these three key areas:

- Being fast to tap into emerging consumer needs;
- Being fast to embrace social media marketing;
- Being fast and creative with product activation in stores.

4.1. Being fast to tap into emerging consumer needs.

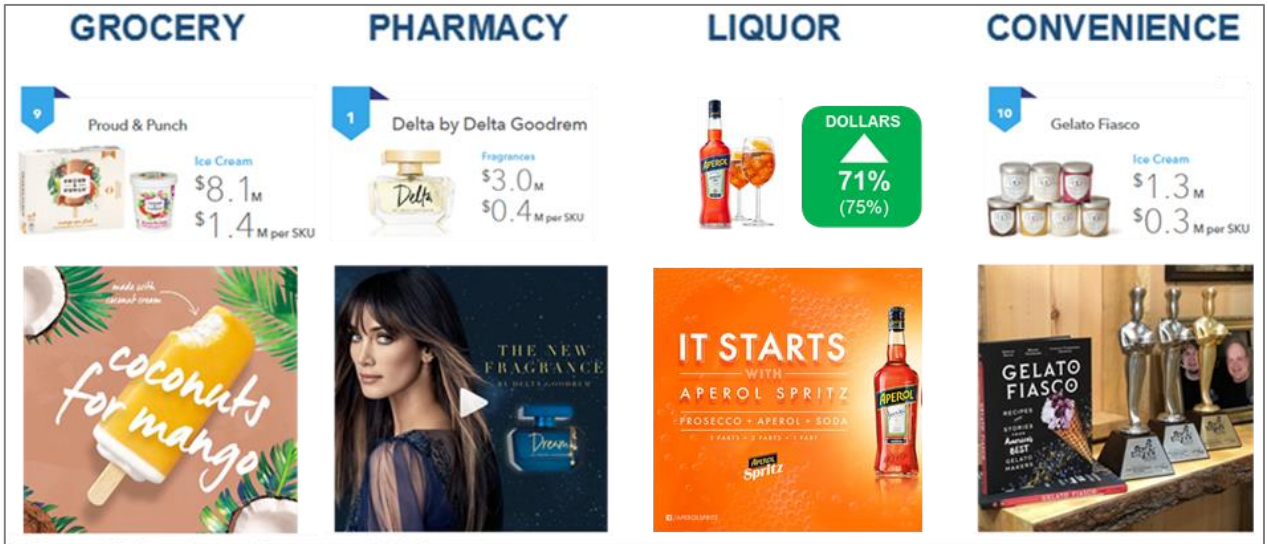
Modern consumers want natural, organic, healthy and 'free from nasties' products. Brands that tapped into these consumer needs were highly successful:

Of all the growth delivered to the Australian retail market by new brands launched in 2018, private label accounted for only 19%, big brands for 66%, and smaller brands for the remaining 15%[80].

[78] https://www.ft.com/content/09271178-6f29-11e8-92d3-6c13e5c92914

[79] Jennings, J, Haughton, L 2000, 'It's not the big that eat the small … It's the fast that eat the slow', HarperCollins Publishers

[80] 'IRI New Product Pacesetters 2018' Report



Source: 'IRI New Product Pacesetters 2018' Report

Figure 10: Top growing brands across four key retail channels (52.4% of total Australian retail sales)

4.2. Being fast to embrace social media marketing.

Social media has become integral to brands success, regardless of whether the brand is old or new. Whether by leveraging strong fan's base and doing large Instagram activation ('Delta' by Delta Goodrem), or by choosing to support a launch in the Australian market in the first four weeks only by engaging with 14 social media influencers off the back of the $5k budget (Gelato Fiasco) – the below brands were clear standouts:

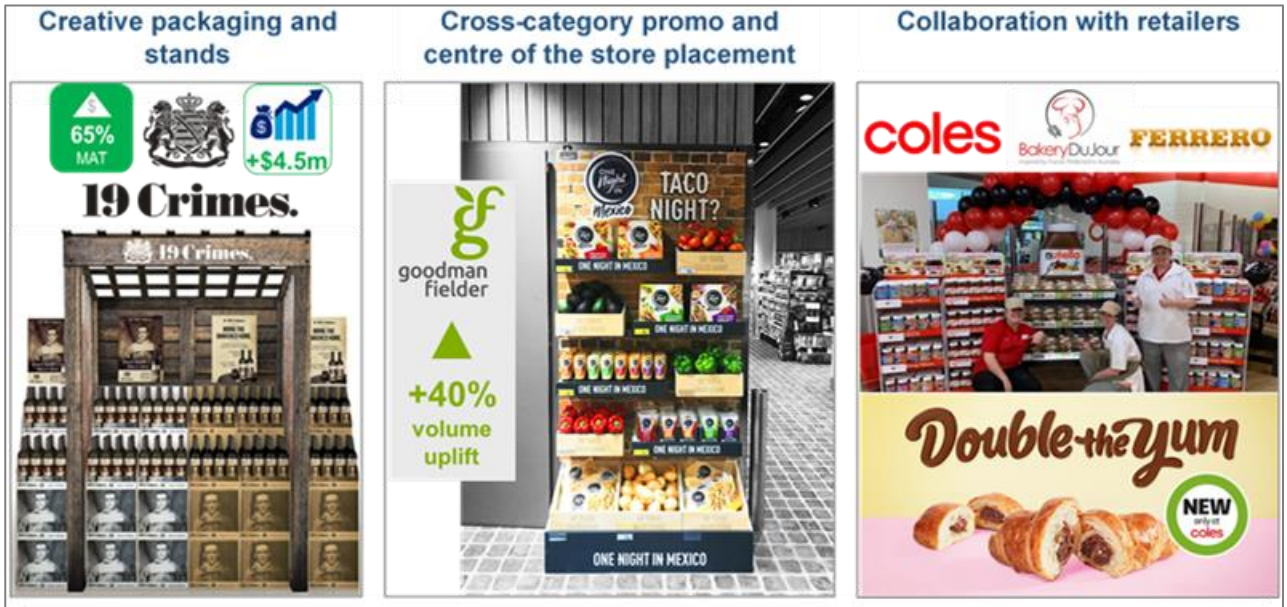
4.3. Being fast and creative with product activation in stores.

Three key themes of successful product activations that helped brands to gain significant sales increase were:

- Differentiation by packaging and creative eye-catching stands;
- Differentiation by cross-category promotion and placement in the centre of the store;

- Differentiation by collaboration with retailers.

Of all the examples above, the best is the one on the right. I believe that the future of retail is in the customer-centric partnership of suppliers with retailers.



Source: 'IRI Market Moves 2018' Report

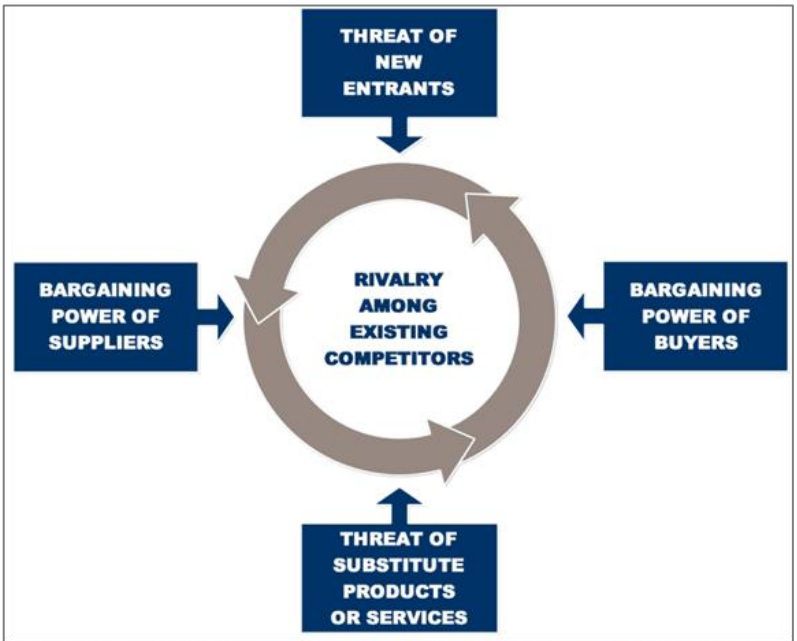
Figure 11: Best-practice in-store activation

5. <u>Customer-centric framework for supplier-retailer partnership.</u>

Have you noticed the language that we use in our daily jobs: "Private label wins!"; "Brands win!" Are we in a war? In fact, we are…and have always been. But the war was never about the customer and always about who gets more: supplier or retailer. No wonder that only one in five Australian customers are completely satisified with the service that they get from retailers[81].

Even the Harvard's framework of the five competitive forces that shape the strategy doesn't have place for customer in it:

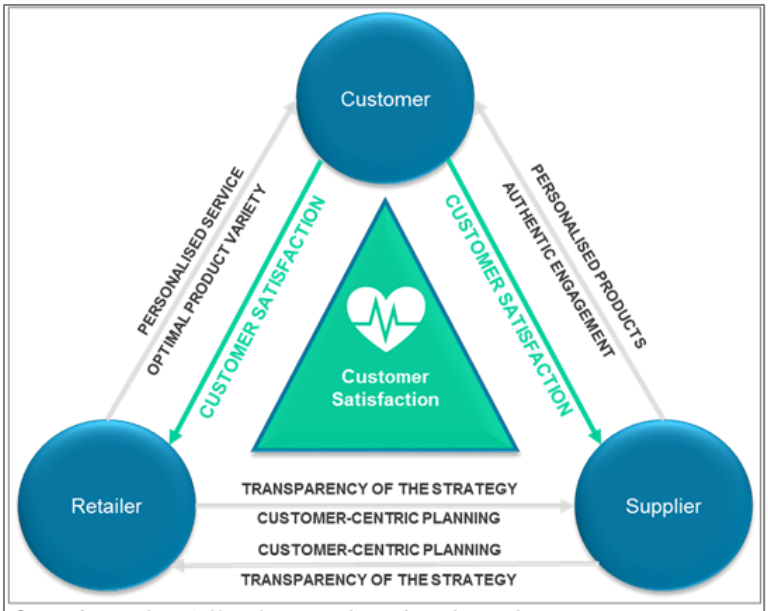
[81] IRI Survey to the Shopper Panel



Source: Harvard Business Review, https://hbr.org/2008/01/the-five-competitive-forces-that-shape-strategy

Figure 12: The Five Competitive Forces that shape the strategy

This approach has to stop. I propose the new customer-centric framework for the supplier-retailer partnership.



Source: framework created based on personal expertise and research

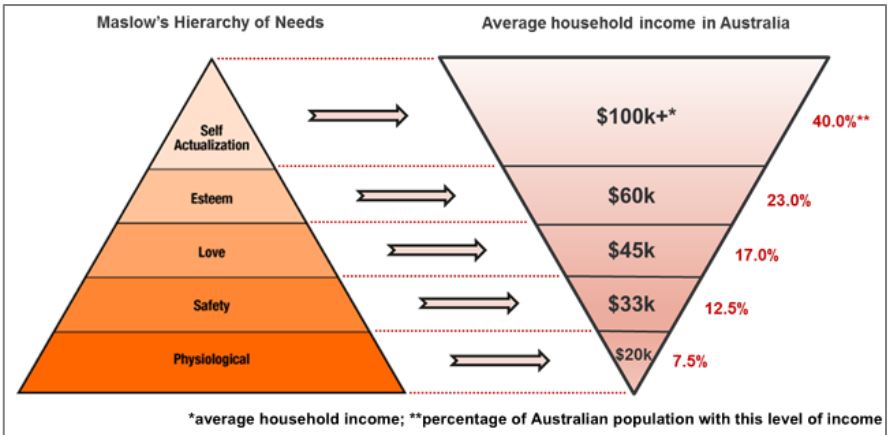
Figure 13: Customer-centric supplier-retailer relationship framework

The new partnership model is based on two ‘groundbreaking’ ideas of simplicity and transparency, with ‘customer satisfaction’ being at the centre of it:

Below is the three-step guide to help with implementation*:
[***important:** all three steps must be done with suppliers and retailers working on them together from day one]

Step I

- **What:** define customer needs
- **How:** use the suggested model below



*average household income; **percentage of Australian population with this level of income

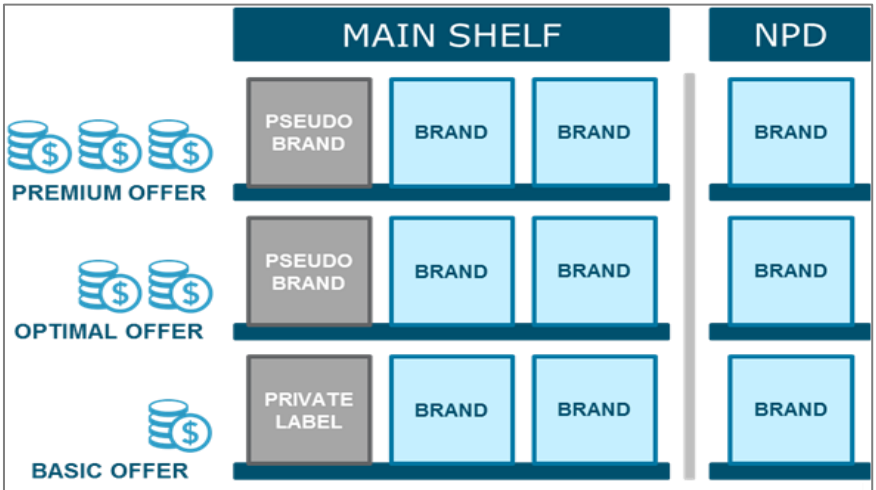
Source: created based on personal expertise and research. Maslow's hierarchy of need is taken from https://cultbranding.com/ceo/maslows-hierarchy-needs-crucial-for-your-business/ ; Inverted pyramid with HH income created using ABS stats taken from https://abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6523.02015-16?OpenDocument

Figure 14: Customer needs by household income

- **Important:** keep it simple. Customer needs are no different from basic human needs and every category can be looked at through this model. Define the role of the category in satisfying the need. Add available consumer research and trends. Alignment of need to household income is given as a guide to help prioritise the importance of the category.

Step II

- **What:** openly share your strategies and agree on the role of private label & brands
- **How:** use the suggested '3x3+3' model below



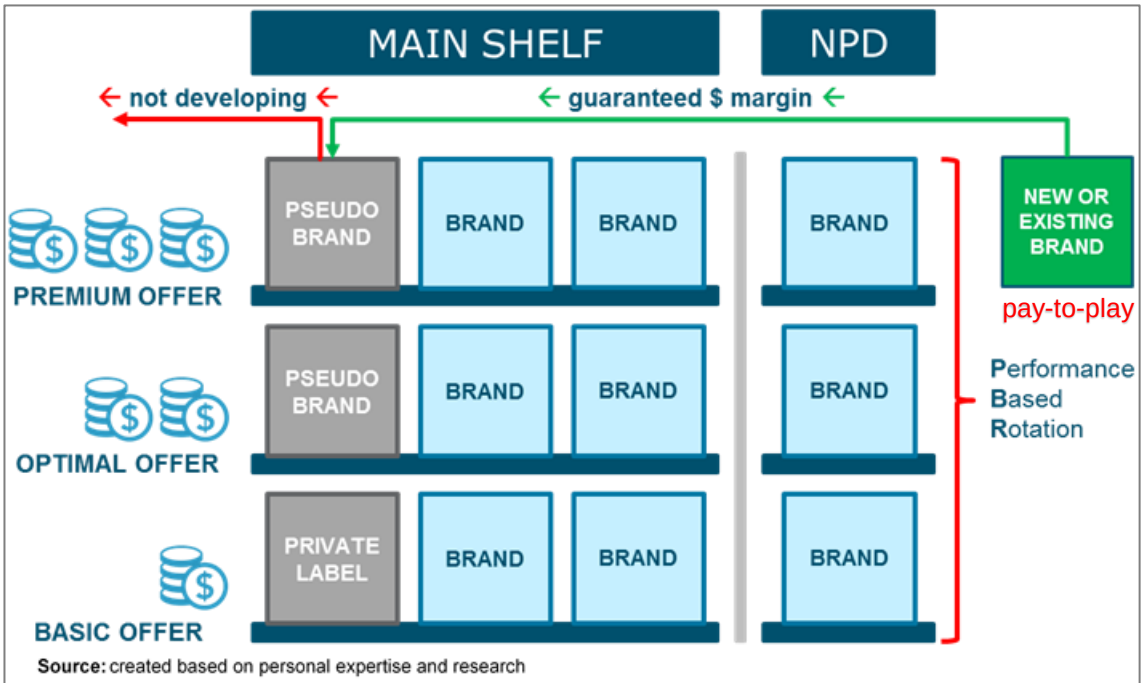
Source: created based on personal expertise and research

Figure 15: '3x3+3' model of optimal product range

- **Important:** transparency is the key. Openly share the strategy with your partner and align on the role that both private label and brands will play in satisfying customer needs.
  '3x3+3' model is given as a guide to help with optimal product range in the category. Depending on the role of the category, number of products can be reduced, but **can't** be increased.

STEP III

- **What:** implement profit-sharing model
- **How:** use the suggested '3x3+3' model below



Source: created based on personal expertise and research

Figure 15: '3x3+3' model of optimal product range v.2: profit sharing

- **Important:** retailer is to give an option to supplier to 'replace' private label with brand if supplier guarantees retailer the same profit margin as retailer could gain from its private label. The option to 'replace' private label should be given to all suppliers.
  This will eliminate tension between suppliers and retailers as suppliers would be given a chance to avoid the development of private label products, whilst retailers will get higher margins without necessity to invest in product development. This needs to be agreed on before retailer invests in developing private label.

Let’s stop talking about ‘customer-first’ strategy, and start practicing it. For everyone’s benefit.

Conclusion

The world without brands is not the answer to everyone’s needs. Transparent customer-centric partnership of suppliers with retailers is. It is strange to think that throwing punches at each other and disguising next moves from the partner will lead any party to success. It will not. It will only take suppliers and retailers further away from the ultimate goal, which is customer satisfaction.

This essay concludes that regardless of the market conditions, brands can and will continue to differentiate, as well as play a major role in the industry’s growth. Optimal mix of private label and proprietary brands can ensure higher margins for retailers, stronger relationships with suppliers, and bigger number of satisfied customers. However, this will only be possible if we fully embrace the suggested partnership framework.

The question is, will we wake up and change, or continue to fight?

Joe Berry Award Essay 2019

Topic 3 - Managing the "Last-Mile" Problem

Q. The most suitable and profitable e-Commerce delivery models for Australia are debatable. The best models might be to the front-door or front-of-store. Some delivery options may be detrimental to the viability of bricks & mortar retailers. How will the rise of e-commerce fuel this debate and what have we learned from overseas experiences?

Entrant Number: JBA-19-013

Laila Khalid

Goodman Fielder

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Executive Summary

Fragmentation of the retail market has led to increased pressure on last-mile logistics. With increasing competition and shopper expectations eroding the incumbents' margin, an efficient model is needed to decrease or justify the disproportional cost of the last-mile.

Consumers are widely shipper-agnostic[82]; picking the fastest and cheapest option to serve their needs. This business case takes the retailers' lens in exploring the current state of the last-mile and how the advent of e-commerce has kicked innovation in logistics into high-gear, both internationally and in Australia.

Key bottlenecks driving last-mile inefficiency have been identified as:

- Drop Density
- Reverse-Logistics through Returns
- First-Time Hit-Rate

Through reaching out to US researchers[83] and Australian logistics companies[84], an evaluation model has been generated for scenario analysis. Optimization initiatives to unblock the inefficiencies have broadly been categorized into:

- Consumer Satisfaction
- Technology Innovation
- Delivery Mode

The business case concludes that the logistics giants of today need to collaborate with emerging startups to bring in a wave of flexibility and innovation. Last-mile sustainability can be unlocked by incorporating an optimal mix of initiatives in every provider's offer. As a result, the total industry will be able to unlock drop density, embrace radical change and avoid further fragmentation of efficiency.

[82] Future of the Logistics Industry. Shifting Patterns. PWC Singapore.
[83] Prof. G. Gopal. Illinois Institute of Technology. Taming the Last-mile. SCMR, 2018
[84] EStore Logistics https://www.estorelogistics.com.au/ 2019

Introduction

The advent of e-commerce does not spell doom for Bricks & Mortar (B&M), nor do the experiences offered by B&M negate the importance of e-commerce. Both channels offer unique value to the consumer, with B&M skewing towards sensory experience and online towards convenience.

Removing barriers in the path-to-purchase and offering a frictionless shopping experience is the first step to becoming a more streamlined marketplace.

Changing retail formats and proliferation of on-demand fulfilment avenues, such as the popular click-&-collect, are major trends shaping the retail industry in Australia. 43% of shoppers have used click-&-collect[85], citing quicker checkout and limited interaction for their choice.

An example of success in B&M is the acceptance and growth of small-format convenience stores in Australia and abroad[86], with dedicated focus to local shoppers and emphasis on fresh. The Grab & Go nature of these stores meets the needs of time-poor shoppers and the store formats encourage multiple[87] daily visits.

There has been a rise in gig-economies offering delivery services including UberEATS, UnoCart[88] and Deliveroo. With 62%[89] of dinner decisions made on the day, online shopping is becoming all about convenience. Quick, seamless delivery is a key aspect of that; as the giants of e-commerce in both China and America are recognizing.

Key Initiatives from International Players:

The race is on to develop not just fast, but express delivery. Alibaba and Amazon have both launched mass initiatives, dubbed “Cainao”[90] and “Dragonboat”[91] respectively, to achieve zero-fulfilment time and express delivery. These initiatives broadly seek to cut out the middleman and take control of their end-to-end supply chain. The saved margin

[85] Retail & Consumer Market Insights. PWC Australia, 2017.
[86] S. Samuel. Top 15 stores around the world. Retail World Issue. International Trends. Mar 2018. Pg 22.
[87] Interview with IRI E-Commerce Insights Manager. R. Butler.
[88] https://unocart.com/
[89] R. Butler. Connecting Shoppers, Retailer & Brands Across the Path to Purchase. IRI Worldwide. 2018
[90] O. Shijia. Alibaba’s Cainiao to create smart logistics network. China Daily. 2018
[91] C. Pereira. A Look At Dragon Boat: Amazon’s Plan To Disrupt The Shipping Industry. Supply Chain 247. 2016.

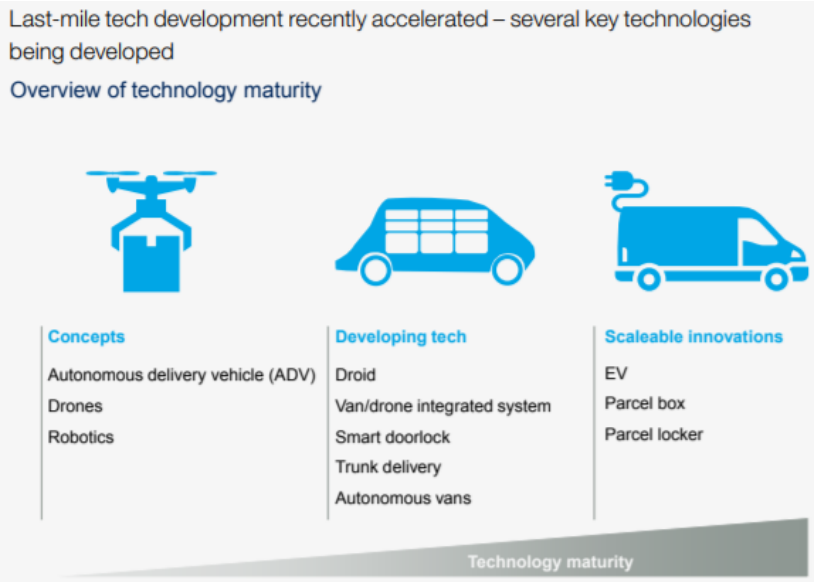
enables them to offer free delivery and returns to consumers; which are emerging as key differentiators between e-commerce and B&M.

Amazon is currently investing in multiple fronts of the last-mile, from leasing a fleet of trucks[92] to developing unmanned vehicles[93]. In 2016, they lost USD7.2 billion in Prime shipping[94]; the differential between subscription fees from customers and the actual delivery costs incurred. The Amazon[95] platform lets consumers receive delivery free within two hours, seven days a week. Amazon Go[96] incorporates "walk-out" technology, letting consumers enjoy cashless, check-out free shopping; a move being trialled by Woolworths[97] in Sydney via their Scan&Go app.

Autonomous technology can potentially transform delivery:

1. E-commerce giant, JD.com[98] has been developing drone airports for non-urban areas.
2. Walmart, in partnership with Google, is piloting self-driving cars for grocery delivery[99].
3. Domino's, has concepted DRU[100] in Australia, an autonomous vehicle that can choose the best route and self-navigate.
4. Starship Technologies[101] (US) have built a fleet of robots designed to travel a 3km radius and deliver packages in 5-30 minutes.

[92] M. O'Brien. Amazon Adding Fleet of 20k Trucks for Delivery Services. Multi-Channel Merchant. 2018
[93] V. Conforti. Amazon's Last-Mile Delivery is Reaching New Heights. Harvard Business School. 2017
[94] S. Dennis. Assessing The Damage Of 'The Amazon Effect'. Forbes. 2017
[95] Amazon. https://www.amazon.com.au/prime 2019
[96] L. Pearce. Amazon: Everything you need to know about its plans for Australia. Huffington Post. 2017
[97] WoW in first with trial of checkout-free technology. Retail World Issue. Oct 2018. Pg 8.
[98] T. F. Chan. One of China's biggest online retailers plans to build nearly 200 drone airports to bring e-commerce to rural China. Business Insider Australia. 2017
[99] R. Redman. Walmart tests driverless cars. Supermarket News. 2018.
[100] Domino's https://www.dominos.com.au/inside-dominos/technology/dru 2019
[101] Starship Technologies. https://www.starship.xyz



[102]

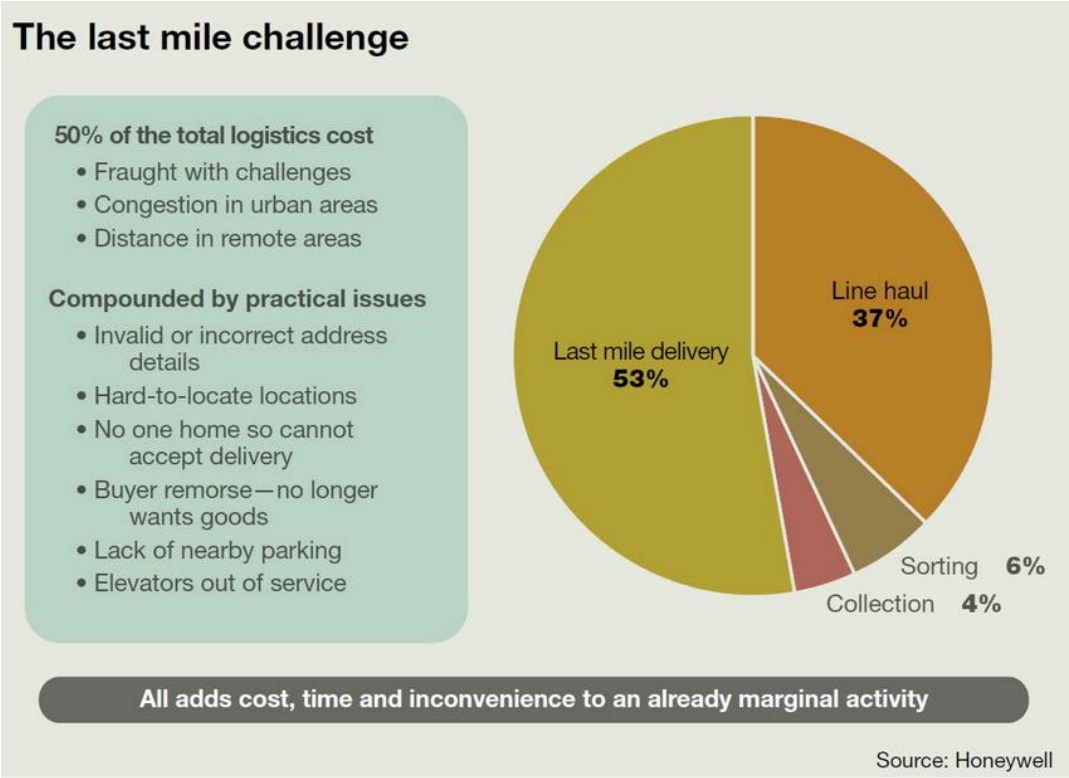
Using data assets and predictive pricing, Amazon aims to create a retail business with higher margins[103] than established players. It is aggressively disrupting numerous industries and reducing the profit pool available to traditional competitors. A typical retailer's focus is on margin, but Amazon focuses on "per-unit cost"[104] which will be used to calculate the Australian last-mile in the coming examples.

State of the Last-mile

The traditional supply chain model enables efficient transportation by aggregating demand and supply, generating high-value flows and creating economies of scale.

However, shipping goods between the hub and the final address, "the last-mile", is the most expensive and inefficient part of the supply chain. It is the most obvious point of friction with an attribution of 28%[105] of transportation costs, while McKinsey recently reported estimates reaching 50%[106].

[102] Mckinsey. Fast forwarding last-mile delivery – implications for the ecosystem. 2018
[103] E. Kim. Amazon Gross Profit Growth at Staggering Rate. CNBC. 2018.
[104] Secrets of Amazon's Winning Marketplace Strategy: The Virtuous Cycle. Mirakl. 2016
[105] B. McCrea. From DC to Final Destination: Last-mile Dilemma. 2016
[106] FarEye. https://www.getfareye.com/ecommercelogistics/industries/retail 2018



[107]

The crux of the increasing inefficiency in the last-mile is the growth of e-commerce, with internet purchases worldwide expected to exceed 10% annual growth for the next few years, up from USD1.5 trillion in 2015 to USD3.5 trillion in 2019[108]. According to the Boston Consulting Group[109], free delivery, free returns and lower prices are the principal reasons for online shopping and delivery.

[107] B. McCrea. From DC to Final Destination: Last-mile Dilemma. Modern Materials Handling. 2016
[108] Retail e-commerce sales worldwide from 2014 to 2021. Statista. 2019
[109] Consumers Free Delivery Option - Increased Online Shopping. Marketing Charts.

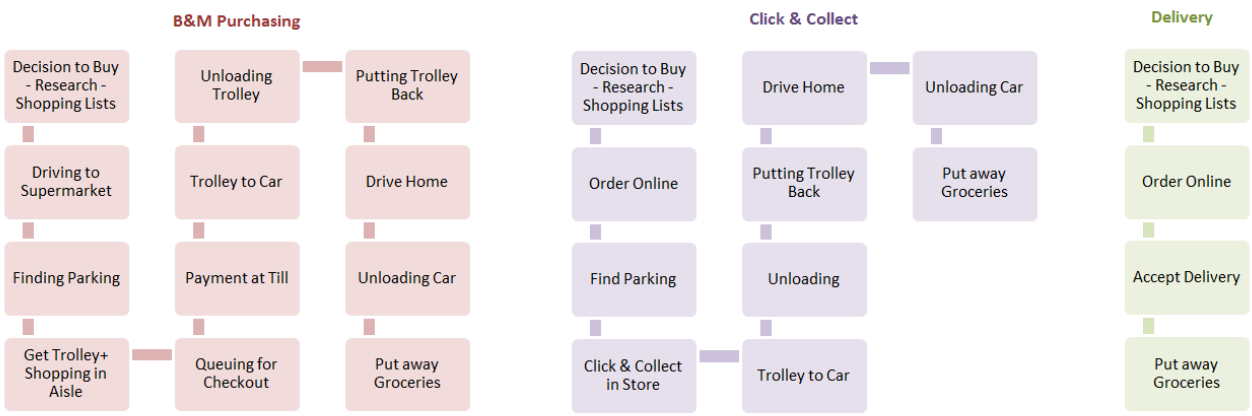


Table: A visualisation of the actions traditionally taken by customers to procure retail items vs the replacement of those actions by Click & Collect or Delivery models.

This growth creates logistics problems for retailers. For instance, single-person households are a growing social trend. With nobody to answer the door, day-deliveries become challenging, resulting in delivery failure and reduction in provider productivity. In some cases, several attempts are made to deliver, leading to growing consumer dissatisfaction and higher costs.

Factors Driving Last-Mile Inefficiency:

1. **Drop Density & Unused Capacity**

Drop density has a significant influence over the profitability of the delivery process. With limited density, logistics providers pay the price for the empty miles that the route covers.

This low utilisation of critical resources can be overcome by targeting and offering discounts to people in the vicinity through real-time push notifications. Peapod[110] (US) and Iconic (AU) have also rolled out discounts for shoppers to choose delivery slots on typically slower weekdays.

2. **Reverse-Logistics from Returns**

Returns represent a big threat to last-mile optimisation with the added return-leg and cost of re-inventorying stock adding up to greater than 2-times the base. On

[110] C. Doering. Peeking inside the pod: A deep look inside Peapod's grocery delivery business. Grocery Dive. 2018.

average, 30% of items bought online are returned as compared to 9% of B&M sales[111].

3. First-Time Hit-Rate (FTHR)

The FTHR represents the percentages of first delivery attempts that are successful. FTHR can be improved by offering time-windows, a fixed slot in which the consumer receives the product. 30%[112] of consumers are willing to pay a premium for guaranteed delivery within time-windows. Delivering to collection points or secure boxes can eliminate the "not-at-home" problem and bring FTHR close to 100%, thus improving urban logistics.

In a pilot project, Walmart has collaborated with US start-up, August[113], allowing drivers secure-keyless entry to shoppers' homes. Consumers can remotely control and monitor, who enters, closes and locks the door. Amazon is also trialling delivering goods to parked cars[114].

Cost Model & Simulation

For this essay, a cost model[115] was developed by reaching out to US researchers. The formula gains insights by evaluating delivery strategies across geographical areas. The calculation has been overlaid by data pertaining to Sydney (urban), metropolitan Sydney (urban & suburban) and the state of NSW as the geographic areas for performing cost comparisons. The model estimates the average last-mile cost per package based on distance, time, drop size, drops per-day per-driver, and handling costs.

The costs are adjusted using coefficients for time-windows, reverse-logistics, manned deliveries, collection points, secure boxes, parcel pooling, vehicles type, packaging and technology. The coefficients were determined by consulting with B2C logistics companies[116] in Australia.

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[111] K. Saleh. E-commerce Product Return Rate. Invespcro.
[112] Auspost Insight Paper. Enabling eCommerce in a digital economy. 2018.
[113] S. Perez. Walmart August. Tech Crunch. 2018
[114] A. Hawkins. Amazon will now deliver packages to the trunk of your car. The Verge 2018.
[115] By Using "Cost Modelling and Simulation of Last-mile Characteristics in an Innovative B2C Supply Chain Environment with Implications on Urban Areas and Cities". R. Gevaers. E. Voorde. T. Vanelslander. Science Direct. 2000.
[116] EStore Logistics https://www.estorelogistics.com.au/ 2019

Base Reference Case

In order to compare costs across multiple options, the model has been run for a base reference case. This scenario assumes no time-windows, no collection points, no returns, no advanced vehicles & routing technologies.

The estimated base cost for deliveries in the city of Sydney is $4.74/package[34] or $12.80/drop. This cost is indexed as 100, and all other costs are scaled relatively. The cost in metropolitan Sydney is $5.69/package[34], a 12% premium and an index of 112. For deliveries covering the state of NSW, the cost is $8.44/package[34], a 78% premium and an index of 178.

Table.1	Standard		Timed Windows		Secure Boxes	Collection Points	
Last Mile Costings	Excl Returns	Incl Returns	2 Hours	4 Hours		Small Load Factor	High Load Factor
Sydney Urban - 1500 ppl/sqkm	100	235	145	128	95	50	30
Sydney Suburban - 407 ppl/sqkm	112	263	162	143	106	56	34
NSW - 9.3 ppl/sqkm	178	419	258	228	169	89	53

The base reference cost for the city of Sydney is $4.74/package.

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Setting the Last-mile for The Future

Individual Strategies:

These have varying effects on last-mile costs, depending upon geographic region.

Time-Windows: It is interesting to note that a two-hour time-window can increase costs by 45%[34]. This is because the drop density for a two-hour slot will be sub-optimal and the truck will not be carrying the critical mass needed to make the route profitable.

The cost of offering timed-windows in the city is cheaper than the base for deliveries across the entire state, indicating that time-windows could be offered in urban areas without a huge premium in costs.

Existing Retail Space for Order Fulfilment[118]: The extensive footprint of local stores in Australia is a key enabler to achieve express fulfilment for e-commerce. This is a callout on how Australia differs from the US and is more aligned with the UK

[117] By Using "Cost Modelling and Simulation of Last-mile Characteristics in an Innovative B2C Supply Chain Environment with Implications on Urban Areas and Cities". R. Gevaers. E. Voorde. T. Vanelslander. Science Direct. 2000 – all amounts in AUD.

[118] N. Matsuda. Alibaba quickens grocery openings. Nikkei Asian Review. 2018.

network[119], which has successfully achieved a mix of e-commerce penetration without threatening B&M. Coles and Woolworths are already saving cost-to-serve by using current retail stores as fulfilment centres for Click-&-Collect orders.

In an effort to battle Walmart, which has stores within 10 miles of 90% of their customer base[120], Amazon has been acquiring urban space to be closer to their shopper densities.

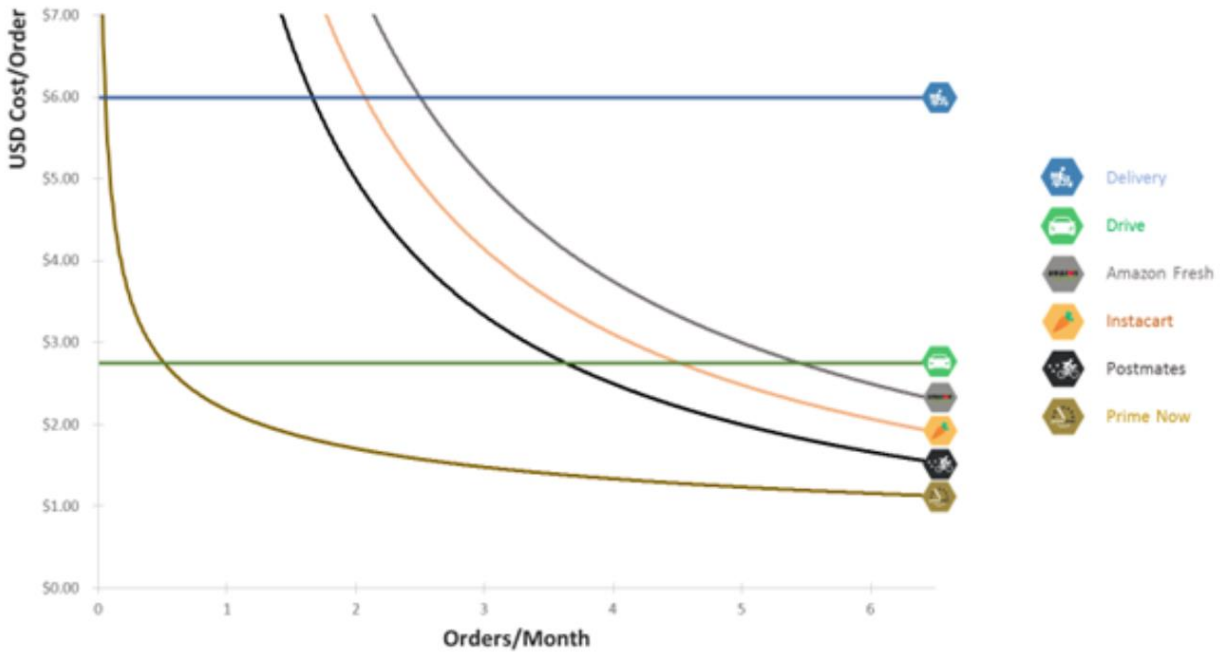
121

Digital Freight Matching: Industry 4.0 has unlocked the sharing economy[122] (shareconomy) concept where start-ups exploit digital technology to offer interactive benchmarking of delivery rates, or matching available capacity with delivery needs.

Companies and individuals are buying and selling excess vehicle capacity in crowd-sharing platforms via online applications. This enables independent drivers to leverage their excess vehicle space and override the drop density challenge. There have been casualties in this space with UberRUSH[123] being the latest, having failed in this criteria. However, many more are taking up the mantle to carve a niche for themselves in the dense urban markets. Longstanding successes in this area include Postmates (US) and Instacart (US) for individuals and Dolly (US), Nimber (Norwegian) and Deliv (US) for companies.

[119] Interview with WooliesX Quentium Insights Manager.
[120] S. Perez. Amazon wants to become Walmart before Walmart can become Amazon. Tech Crunch. 2017
[121] Auspost Insight Paper. Enabling eCommerce in a digital economy. 2018.
[122] S. Ling. How Singapore learned to share. CPA in the Black Magazine Issue. Aug 2018. Pg 49.
[123] D. Z. Morris. Uber Is Ending Its UberRUSH Delivery Service. Fortune. 2018.

How the proliferation of on-demand delivery services have reduced the cost/order for the average shopper in the US.



124

Routing Optimisation[125] Tools: These are a stride forward with algorithms dictating dynamic routing options to reduce empty miles, and deliver savings of ~13%[34]. UPS[126] initiated a move where their drivers stopped turning left, allowing them to go with the flow of traffic even if it meant going further, saving them 45m litres of fuel annually.

Collection Points & Secure Boxes: If a shipper delivers only to collection points or secure boxes, the company would be able to achieve more packages-per-drop and an FTHR of 100%. The limiting factor would be vehicle capacity and associated load factors. The cost model has been run for low and high load factors. Table.1 shows that last-mile costs can be reduced by more than 50%[34] with this strategy.

Bicycles & Robotic Bins: Using these for delivery in the city centre could save 35%[34] even if time-windows are offered.

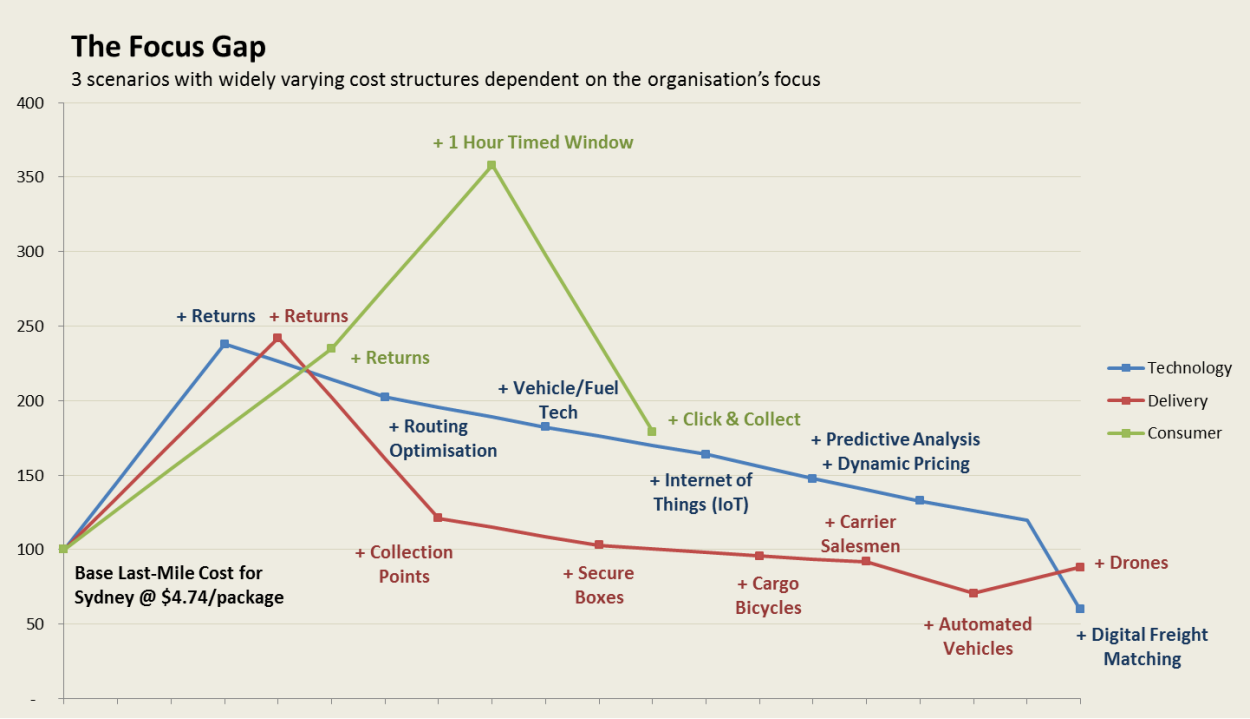
[124] A. Evans Retail, Ownership and Deflation in the Last-Mile. Medium. 2017
[125] Loginext. https://www.loginextsolutions.com/industries/ecommerce-logistics-optimisation 2018
[126] A. Mayyasi. Why UPS Trucks Don't Turn Left. Priceonomics. 2014.

Combining Individual Strategies

The strategies of the last-mile discussed have been categorised into three key focuses:

- Consumer Satisfaction
- Technology Innovation
- Delivery Mode

These initiatives along with other international retailer focus areas have been modelled graphically to present a combined visualisation of the last-mile's future.



127

As presented above, achieving consumer satisfaction will add significantly incremental cost. Without compromising on shopper experience, the last-mile can be optimised by introducing technology and delivery focused initiatives that will offset the spike presented by reverse-logistics and timed-windows. Every provider will arrive at their own blend of initiatives to maintain or decrease last-mile costs.

[127] By Using "Cost Modelling and Simulation of Last-mile Characteristics in an Innovative B2C Supply Chain Environment with Implications on Urban Areas and Cities". R. Gevaers. E. Voorde. T. Vanelslander. Science Direct. 2000.

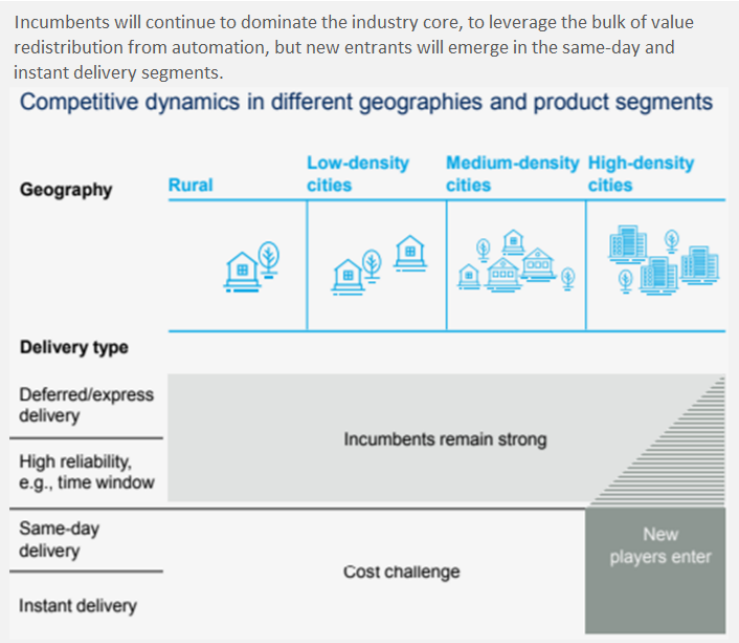
Implications

Based on this case, timed-windows across NSW can be 1.8 times[34] more expensive than urban Sydney. This can make the case for offering express delivery in urban areas. Routing tools have a sizeable impact on last-mile costs and should be pursued by all providers. Collection points and secure boxes can decrease costs dramatically across fleets.

Perhaps the most important call-out from this research is that offering returns & time-windows will incur significant costs. The right delivery mode choices, combined with routing tool innovations, fulfilment centres and in-vehicle technology, can enable an enterprise to offer better shopper service with lower costs and make the difference in a very competitive sector.

Conclusion

Multiple start-ups are leveraging the gig-economy and data analytics to match excess capacity with delivery needs. These asset-light companies have a “sharing business model” where anyone from 3rd-party contractors to a company’s own employees are stepping up to be the deliverer. With the advent of new physical and digital standards, it is becoming easier for companies to share vehicle space and to connect across transport networks.



[128]

[128] Mckinsey. Fast forwarding last-mile delivery – implications for the ecosystem. 2018

The advantage these companies have is their flexibility for change and their early adoption of technology. Last-mile delivery will only become more fragmented, with crowd solutions gaining ground. These start-ups can collaborate with incumbents and complement their service offers. With their asset-light and fluid business models, start-ups are in a better position to service same-day and instant delivery.

Technology is reshaping the last-mile landscape and will unlock substantial value. The current providers will continue to dominate the industry's core. The capital-intensive nature of maintaining a full-scale logistics network and driving economies of scale are immense barriers to entry for new players. However, the inertia of the incumbents' established structures may play against them.

Mirroring the UK, Australia can optimise current B&M footprints for fulfilment and manage e-commerce's growing needs without incremental asset investment. Automated fulfilment centres that leverage current store footprint, acceptance of the "shareconomy" to utilize unused capacity and using predictive route-mapping software will offer consumers new ways of partnering. Through embracing the latest emerging automation technology, incumbents can ensure that the bulk of value redistribution remains in their portfolio.

Meeting the consumer's expectations comes at the cost of increasing the last-mile by multiple factors. A blend of technology and delivery initiatives is needed to alleviate the increasing cost of putting the shopper first. To accomplish this, we need an optimal mix of the old and the new. Through embracing a co-existing model, we can actively welcome disruptors into the arena and make the last-mile sustainable.

Joe Berry Award Essay 2019

Topic 3 – Managing the “Last Mile” problem

Q. The most suitable and profitable eCommerce delivery models for Australia are debatable. The best models might be to the front-door or front-of-store. Some delivery options may be detrimental to the viability of bricks & mortar retailers. How will the rise of e-commerce fuel this debate and what have we learned from overseas experiences?

Entrant number: JBA-19-0372

Sarah King

Woolworths

Contents

From a marathon to a sprint, facing into the challenge of the last mile.

Executive Summary

The Australian retail marketplace has been reshaped by increasingly demanding shopper expectations. Convenience is the heart of this evolution. New technology and digitalisation have driven the change, providing customers with instant gratification.

Retail channels are shifting, traditional bricks and mortar (B&M) stores blending with online shopping. Customers expect a frictionless experience as they shop across platforms. The sustainability and profitability of the last mile delivery is in question as FMCG businesses re-evaluate this new landscape.

Current home delivery, click and collect and crowdsourcing solutions present both costs and benefits to customers and retailers. The role of each of these methods is blurring, and needs to be purposeful for sustainable growth for FMCG businesses.

Retailers need to rethink their current delivery models if they are to continue to meet the differing needs of Australian consumers.

Introduction

The Australian retail marketplace has transformed. Major players are honing their skills, small scale start-ups that were previously teetering on the edge of the field are formidable players. Where retailers were once playing test cricket, the game is now Twenty 20.

The continuous change in shoppers' expectations, lifestyles and overarching need for convenience have fundamentally reset the retail world. Today's consumers are hyperconnected and striving to find ways to simplify their day to day lives[129]. Shoppers now demand a frictionless shopping experience, across multiple touchpoints, any time[130]. Consumers are no longer obligated to walk into physical stores to make their purchase, challenging the traditional B&M marketplace. Retailers are expected to deliver this across digital retailing with rapidly developing technology fuelling this revolution.

To stay ahead of the game, it is essential for FMCG businesses to effectively engage with consumers across all channels. A robust understanding of evolving technology and delivery solutions will make or break the future for a retailer. The last mile in delivery is paramount for shopping digitally and is currently both time consuming and expensive to implement.

This paper explores the viability of the current online delivery landscape for customer expectations and business profitability in Australia, and challenges the opportunity for dynamic delivery solutions.

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[129] Nielsen, 'The quest for convenience' 7 Aug 2018

https://www.nielsen.com/apac/en/insights/reports/2018/the-quest-for-convenience.html

[130] Ibid

The Emerging Consumer

Today's consumers are undergoing a mindset shift. We live in an on-demand environment, where instant gratification is an expected norm[131]. The ability to customise and personalise the experience is fundamental for consumer satisfaction.

To understand the influence on eCommerce we need to consider the macro trends for immediate gratification, customer promiscuity and urbanisation.

On-Demand

The accessibility of information and desire for immediate satiety has changed the pace at which we seek gratification. There is a proliferation of on-demand goods and services, with mediums such as mobile apps and smart home devices more prominent than ever[132].

Millennials are leading the charge, already the largest online shopping group in Australia[133]. Digital platforms are used as information epicentres[134]. New customer expectations are unfolding[135], which becomes a core determinant for the future of online channels.

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[131] Mckinsey, 'Winning in an era of unprecedented disruption: A perspective on US retail' Jan 2019

https://www.mckinsey.com/industries/retail/our-insights/winning-in-an-era-of-unprecedented-disruption-a-perspective-on-us-retail

[132] Appendix 1

[133] Statista, Food and Beverages market, Australia, 2019

https://www.statista.com/outlook/253/107/food-beverages/australia

[134] Nielsen, 'Millenials on Millenials' 14 May 2018

https://www.nielsen.com/ca/en/insights/reports/2018/millennials-on-millennials.htm

[135] Forbes, 'Grocery shifts to digital as customers demand online experience' 25 Jan 2017

https://www.forbes.com/sites/larrymyler/2017/01/25/grocery-shifts-to-digital-as-customers-demand-online-experience/#319c52b670e1

Customer Promiscuity

Customers are more promiscuous than ever. The motivation; to get the best deal possible. Evolving technology has reduced the drivers of customer loyalty. Enabling customers to switch brands or channels with ease.

Ultimately, convenience is at the heart of the decision and will sway customers between channels with consumption, shopping and engagement at the helm[136]. The ability to engage, connect and deliver to a customer across multiple mediums is cardinal[137].

Urbanisation

People are increasingly moving to urban centres in search of employment and economic benefits. Half of the world's population currently lives in cities or towns[138]. Whilst this opens economies of scale with delivery solutions servicing a greater population density, this does not address the complexity for those living in rural or regional areas. The challenge; how do you deliver an acceptable level of service that is also sustainable?

Australia is particularly unique in this challenge, with over two thirds of the population already living in cities[139]. These cities are highly urbanised along two coastal regions[140]. This remaining third live in regional centres or small towns, with a small

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[136] Nielsen, 'The quest for convenience' 7 Aug 2018

https://www.nielsen.com/apac/en/insights/reports/2018/the-quest-for-convenience.html

[137] Mckinsey, 'Winning in an era of unprecedented disruption: A perspective on US retail' Jan 2019

https://www.mckinsey.com/industries/retail/our-insights/winning-in-an-era-of-unprecedented-disruption-a-perspective-on-us-retail

[138] National Geographic, 'Urban threats: Urbanization spurs a unique set of issues to both humans and animals'

https://www.nationalgeographic.com/environment/habitats/urban-threats/

[139] ABS, 'Regional population growth, Australia, 2016-17' 24 April 2018

https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3218.0Main%20Features12016-17?opendocument&tabname=Summary&prodno=3218.0&issue=2016-17&num=&view=

[140] Appendix 2

proportion residing in entirely remote areas. New solutions need to cater to Australia's unique position.

ECommerce is a Contest

For FMCG businesses to survive this new landscape, eCommerce must be fully integrated into their day to day operations with the digital presence exponentially more important than the physical one[141]. Traditional retailers around the world, such as Walmart and Tesco, are on a competing quest to morph existing B&M structures into new hybrid models at unprecedented speeds.

With customers spending on average six hours a day on digital media, retailers and suppliers alike are competing with customers for both online and offline sales. By 2022 digital channels are expected to influence 41% of offline sales[142].

In Australia, online food and beverage sales are currently valued at $2,098M, with an expected CAGR of 14.5%[143]. We have recently seen substantial investment from lagging B&M retailers such as Woolworths, Coles and Myer to revolutionise their digital offering. In 2018 an estimated $4.8 billion was spent on technology by local retailers with another $5 billion expected this year[144]. If this investment is to be sustainable, one must speculate if retailers are realising adequate returns. Is digital so necessary that profitability is a secondary consideration?

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[141] Mckinsey, 'Winning in an era of unprecedented disruption: A perspective on US retail' Jan 2019

https://www.mckinsey.com/industries/retail/our-insights/winning-in-an-era-of-unprecedented-disruption-a-perspective-on-us-retail

[142] Ibid

[143] Statista, Food and Beverages market, Australia, 2019

https://www.statista.com/outlook/253/107/food-beverages/australia

[144] Australian Financial Review, 'Woolworths, Coles and other retailers boost online shopping investment' 6 Dec 2018

https://www.afr.com/brand/boss/retailers-accelerating-investment-in-online-shopping-20181107-h17lpz

However, eCommerce is at a climactic point, both Coles and Super Retail Group, among others, have confirmed online businesses are now turning a profit[145]. Omni-channel retailing is now at the forefront of strategic growth plans. If we consider the competitive territory retailers are facing, the need for a significant shift is apparent. Enter Amazon. The online behemoth has become a major disruptive force[146]. With the threat of Amazon as a new entrant, local retailers have transformed their digital offer with a clear purpose; to create a seamless and personalised shopping experience[147].

This is not dissimilar to transformations globally. Walmart faced into this challenge five years ago. Recognising the need to move swiftly, the US based retailer has aggressively been on a mission to acquire many start-ups to integrate into their existing structure, including Jet, Flipkart and Parcel[148]. These start-ups enabled Walmart to bring new knowledge, capability and expertise in house[149].

Today's Last Mile Experiment

There's much we can learn from Walmart's approach. The world's largest B&M retailer is not only surviving the new world, it's flourishing[150]. They modernised both

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[145] Ibid

[146] Australian Financial Review, 'Woolworths, Coles and other retailers boost online shopping investment' 6 Dec 2018

https://www.afr.com/brand/boss/retailers-accelerating-investment-in-online-shopping-20181107-h17lpz

[147] Woolworths Ltd annual report 2018

https://www.woolworthsgroup.com.au/icms_docs/195396_annual-report-2018.pdf

[148] Australian Financial Review, 'Woolworths, Coles and other retailers boost online shopping investment' 6 Dec 2018

https://www.afr.com/brand/boss/retailers-accelerating-investment-in-online-shopping-20181107-h17lpz

[149] Harvard Business Review, 'We need people to lean into the future' Mar-Apr 2017

https://hbr.org/2017/03/we-need-people-to-lean-into-the-future

[150] Forbes, 'Walmart's E-commerce tactics against amazon look to be paying off' 16 Aug 2018

https://www.forbes.com/sites/andriacheng/2018/08/16/walmarts-ecommerce-tactic-against-amazon-is-paying-off/#1bd9c765b74d

the front end and back of house operations with customer experience at the centre[151]. Walmart could reap the benefits of improving cost efficiencies in its core operations to reinvest into customer service.

For digital customers, this service is measured by the convenience and value of the delivery solution[152]. This is the last mile of delivery for eCommerce and is the most costly and inefficient step in the logistics chain[153].

To interpret the sustainability of future growth in eCommerce, we must first examine the viability of the current last mile solutions, including home delivery, click and collect and crowdsourcing.

Home Delivery

The most expensive delivery solution for both retailers and customers, with the cost of doing business at 18% profit[154], home delivery provides quintessential convenience. Whilst a great service for customers, this is less so for retailers. With customers completing their purchase wholly outside of the physical store, in store experiences are removed. This leads to lost incremental sales, limited brand presence and lack of engagement with store staff.

Furthermore, FMCG businesses face high labour and logistics costs. With the prevalence of fast and free delivery growing, customers are also less willing to pay for delivery, leaving retailers to absorb these costs[155]. Subscription based services,

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[151] Harvard Business Review, 'We need people to lean into the future' Mar-Apr 2017 https://hbr.org/2017/03/we-need-people-to-lean-into-the-future

[152] The Guardian, 'Waitrose voted UK's best supermarket' 16 Feb 2017 https://www.theguardian.com/business/2017/feb/16/waitrose-voted-uk-best-supermarket-which-survey

[153] Business Insider, 'The challenges of last mile logistics and delivery technology solutions' 10 May 2018 https://www.businessinsider.com/last-mile-delivery-shipping-explained/?r=AU&IR=T

[154] Appendix 3

[155] Business Insider, 'The challenges of last mile logistics and delivery technology solutions' 10 May 2018 https://www.businessinsider.com/last-mile-delivery-shipping-explained/?r=AU&IR=T

such as Amazon Prime, have become successful businesses by offsetting the costs of free delivery by offering high value, low cost services to customers. In turn, Amazon has enjoyed higher loyalty and sales growth[156].

Retailers have attempted to further improve the efficiencies of home delivery by creating dedicated online only fulfillment centres. In Australia, Woolworths was the first to open a dark store in 2014, following in the footsteps of UK retailers such as Tesco, Sainsburys and Waitrose[157]. The UK centres performed up to three times faster than traditional in store picking due to optimised layouts which helped to fractionalise costs[158]. New technology is also playing a role; robotics is being implemented to complete basic back office tasks, stock filling, cleaning or online order picking to further maximise cost savings.

In the US, Walmart and Kroger are already in the early stages of testing self-driving delivery[159]. Similarly, in Europe and NZ drones have been successfully tested by Dominos Pizza as a future solution for labour limitations[160]. Robotics are only just surfacing in last mile solutions. With the scope for the future of this technology still in its infancy, FMCG businesses would be remiss to bypass interrogating their potential.

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[156] Amazon website

https://www.amazon.com/amazonprime?_encoding=UTF8&%2AVersion%2A=1&%2Aentries%2A=0

[157] Sydney Morning Herald, 'Woolworths opens first online-only 'dark' store' 11 Aug 2014

https://www.smh.com.au/business/companies/woolworths-opens-first-onlineonly-dark-store-20140811-102lh0.html

[158] Ibid

[159] Forbes, 'Walmart's E-commerce tactics against amazon look to be paying off' 16 Aug 2018

https://www.forbes.com/sites/andriacheng/2018/08/16/walmarts-ecommerce-tactic-against-amazon-is-paying-off/#1bd9c765b74d

[160] Business Insider, 'The Domino's CEO says pizza delivery drones will create even more jobs than the ones they replace' 31 Mar 2017

https://www.businessinsider.com.au/dominos-pizza-delivery-drones-jobs-2017-3

Click and Collect

Click and Collect is currently the cheapest delivery solution with a 11% benefit in profit when compared to home delivery[161]. Although labour intensive, the high logistics costs are removed. The demand for convenience is met, with empowered customers picking up their orders when desired. Foot traffic is encouraged back in-store, benefiting retailers[162].

Walmart's success has been accomplished through a combined digital and in store presence[163]. With a sizeable store fleet, the retailer can service customers online and in-store frictionlessly. Click and Collect is a core pillar of this growth strategy, fundamentally different to Amazon's offering[164]. A colossal eCommerce disrupter, Amazon has also diverged from its core platform and has moved into B&M retailing[165].

Amazon's expansion, including the formation of Amazon Pickup[166], advocates for Click and Collect's profitability to the retailer. Both major Australian supermarkets, Woolworths and Coles, have extended pick-up to over 1,000 sites in the last year[167] to future proof the solution.

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[161] Appendix 3

[162] Forbes, 'Walmart's E-commerce tactics against amazon look to be paying off' 16 Aug 2018

https://www.forbes.com/sites/andriacheng/2018/08/16/walmarts-ecommerce-tactic-against-amazon-is-paying-off/#1bd9c765b74d

[163] Ibid

[164] Ibid

[165] Forbes, 'Five reasons why Amazon is moving into bricks-and-mortar retail' 29 Dec 2018

https://www.forbes.com/sites/annaschaverien/2018/12/29/amazon-online-offline-store-retail/#d8b61e551287

[166] Amazon website

https://www.amazon.com/gp/help/customer/display.html?nodeId=201911190

[167] Australian Financial Review, 'Woolworths, Coles and other retailers boost online shopping investment' 6 Dec 2018

https://www.afr.com/brand/boss/retailers-accelerating-investment-in-online-shopping-20181107-h17lpz

Crowdsourcing;

A more recent phenomenon, crowdsourcing is now all around us, from Airtasker to Airbnb and Uber. The ubiquity of crowdsourcing is outstanding in a few short years, predominantly in hospitality[168].

If we look closer at apps such as Uber Eats, the offer is quite simple. Connecting customers with instant gratification[169], the speed of delivery is linked to the speed of satisfaction[170].

Currently, both Woolworths and Coles are trialling crowdsourcing methods. Through services such as Jimmy Brings and Airtasker, the supermarket giants can now offer the delivery speeds of agile start-ups[171]. However, considerations need to be made regarding royalties or cost of acquisition.

To achieve extraordinary convenience, customers are willing to pay, thereby overcoming one of the crucial barriers to profitability of home delivery. Is time more valuable than tangible costs for today's consumer? With the expectations of on-demand delivery increasing as we chase transcending convenience, the value of last mile delivery to a customer needs to been turned on its head.

What lies in store for the future?

Test and learn is the forte of today's retailers with new technology constantly being trialled and adapted. Unfortunately, Australia's unique spread of population density

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[168] Business Insider, 'The challenges of last mile logistics and delivery technology solutions' 10 May 2018

https://www.businessinsider.com/last-mile-delivery-shipping-explained/?r=AU&IR=T

[169] Business Insider, 'Uber Eats is the fastest-growing meal delivery service - but it faces stiff competition ahead' 23 Apr 2018

https://www.businessinsider.com/uber-eats-is-the-fastest-growing-meal-delivery-service-2018-4/?r=AU&IR=T

[170] Forbes, 'Why UberEats is succeeding in Australia' 16 Mar 2017

https://www.forbes.com/sites/nguyenjames/2017/03/16/why-ubereats-is-changing-australias-food-scene/#165a03785103

[171] Ibid

presents an enormous challenge for future last mile solutions. We need to consider the needs of customers in urban and regional areas separately. The viability is measured by the movement of parcel volumes required to achieve economies of scale.

Urban

High urban centres operate at a different pace with consumers more demanding on time[172]. In this environment, the convenience to a consumer for home delivery will outweigh the cost of delivery fees and intangible costs of wait time, late deliveries and incorrect goods.

Furthermore, in urban cities proximity of stops and parcel volumes is high from increasing population densities, enabling businesses to fractionalise costs. As urban centres grow, so too does congestion, this can slow the delivery process down[173].

Fusing home delivery with crowdsourcing capability achieves a lower cost structure and improved delivery speeds. FMCG businesses must not underestimate the customer's willingness to pay for convenience, offsetting the profitability barriers.

Regional

The opposite is true for delivery to regional areas. With the spread of population, delivery costs are exceptionally high. A significant increase in deliveries is impossible to realise the necessary economies of scale.

Understanding a customer's tendency to switch retailers for value, a retailer would need to either absorb or offset the high cost of home delivery, rather than charging uncompetitive fees. Subscription type services will also be unfavourable for regional

[172] Nielsen, 'The quest for convenience' 7 Aug 2018

https://www.nielsen.com/apac/en/insights/reports/2018/the-quest-for-convenience.html

[173] Ibid

areas, as the high cost of delivery to remote locations will not be offset by the cost of the service[174].

Alternatively, FMCG businesses will be able to realise better returns by encouraging customers to come in store, with Click and Collect the best method by removing high logistics costs. Increasing the available pick up locations, currently including supermarket stores, petrol sites and Australia Post lockers[175], will substantially improve customer engagement. Investing in drive through pick-ups, although currently limited[176], will change the game for local retailers.

Conclusion

The retail landscape has become a melting pot. The future channels for retail are blending together. Old and new players have combined, amalgamating into an entirely new narrative. The flamboyant moves by Walmart and Amazon have further propelled the retail landscape into a new era, with B&M stores operating in tandem with digital.

The status quo in current delivery models is rapidly wavering. Retailers who are unable to utilise the emerging technology effectively will at best, suffer customer losses, at worst, will cease to exist in the next five years. Inversely, retailers who can adapt and significantly step change their business will see unfathomable growth.

This can only be achieved through a differentiated delivery model for regional and urban Australia. The current cookie cutter perspective will not suffice.

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[174] Business Insider, 'Prime membership growth is decelerating' 26 July 2018

https://www.businessinsider.com/amazon-prime-membership-growth-decelerating-2018-7/?r=AU&IR=T

[175] Australian Financial Review, 'Woolworths, Coles and other retailers boost online shopping investment' 6 Dec 2018

https://www.afr.com/brand/boss/retailers-accelerating-investment-in-online-shopping-20181107-h17lpz

[176] Woolworths website

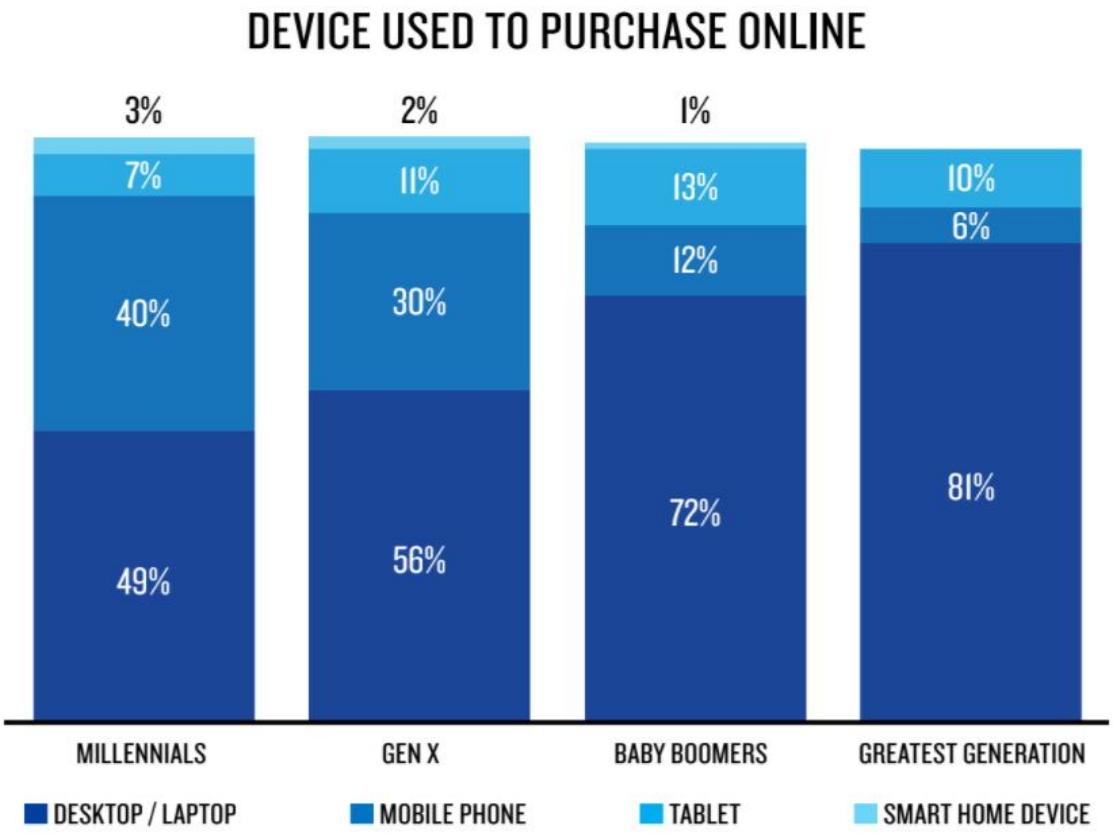
https://www.woolworths.com.au/shop/discover/shopping-online/pickup

Retailers need to expand availability of Click and Collect pick-up points to satisfy convenience whilst maximising profitability. Additionally, retailers need to overinvest in technology to boost cost savings for timely deliveries in urban hubs. A purposeful convergence of delivery methods is necessary.

Keeping up with the pack is no longer enough. FMCG businesses must be agile, questioning and daring if they hope to run their own race.

Appendix

Appendix 1. Nielsen Homescan Panel[177]

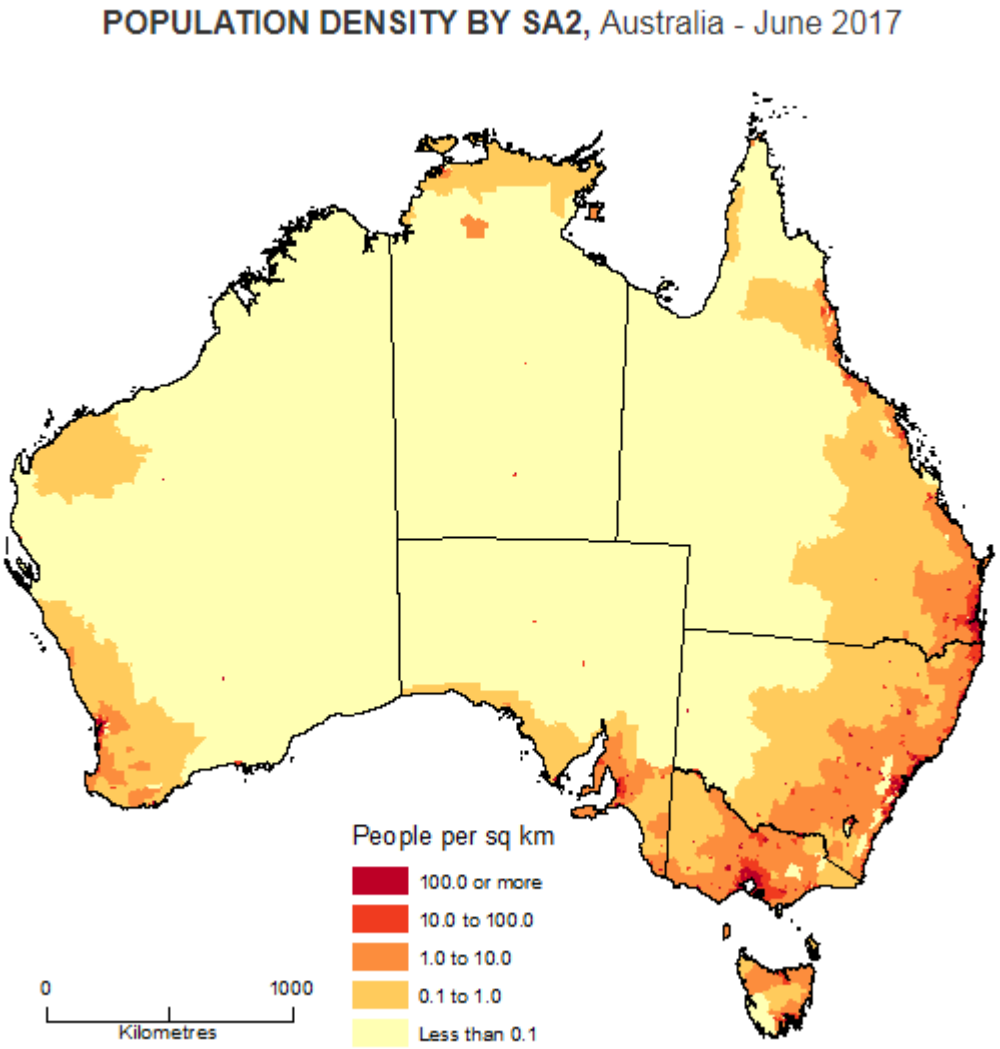


[177] Nielsen, 'Millenials on Millenials' 14 May 2018

Nielsen Homescan Panel; Total U.S., 52 weeks ended 05/13/2017

https://www.nielsen.com/ca/en/insights/reports/2018/millennials-on-millennials.html

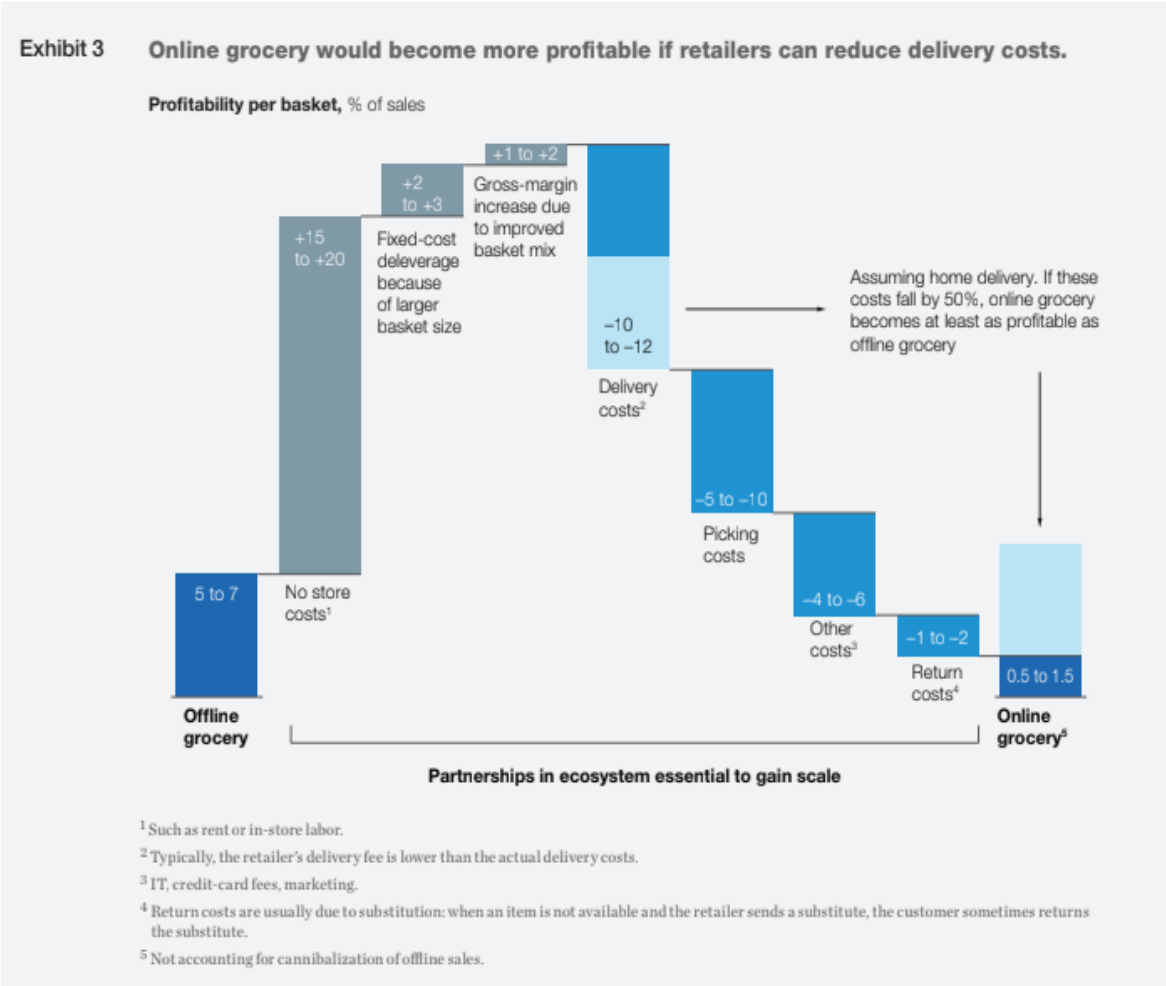
Appendix 2. POPULATION DENSITY BY SA2[178]



[178] ABS, 'Regional population growth, Australia, 2016-17' 24 April 2018, Australia - June 2017

https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3218.0Main%20Features702016-17?opendocument&tabname=Summary&prodno=3218.0&issue=2016-17&num=&view=

Appendix 3. Profitability per basket, % of sales, online delivery[179]



[179] McKinsey, 'Reviving grocery retail: six imperatives' Dec 2018

https://www.mckinsey.com/industries/retail/our-insights/reviving-grocery-retail-six-imperatives

Joe Berry Award Essay 2019

Topic 3 – Managing the “Last Mile” Problem

Q. The most suitable and profitable eCommerce delivery models for Australia are debatable. The best models might be to the front-door or front-of-store. Some delivery options may be detrimental to the viability of bricks & mortar retailers. How will the rise of e-commerce fuel this debate and what have we learned from overseas experiences?

Entrant Number JBA-19-026

Alec Renehan

Coles Melbourne

Contents

Executive Summary

If Amazon were to be believed, last-mile delivery would be characterised by drones delivering goods in inflatable packaging,[180] picked from underwater warehouses,[181] and dispatched from airborne fulfilment centres,[182] before self-destructing.[183] Yet, until Jeff Bezos is able to realise his dreams, retailers are facing a moment of fundamental change. Online retail has created a focus on delivery and poses a challenge for bricks-and-mortar retailers with notoriously tight margins.

Adding delivery costs can often create a negative margin – harming overall profitability with each incremental sale. At the same time, refusing to offer delivery may reduce sales volume and harm long-term profitability.

This challenge is exacerbated by factors retailers have little control over, from technological development, reliance on third-party infrastructure, and the vagaries of customer preferences. As preferences shift, retailers that overinvest in out-of-favour delivery methods risk being left with stranded assets.

In this context, this essay will make the case that last-mile logistics networks should be viewed as complex adaptive systems. Then, viewed through this framework, will put forward four recommendations for retailers to best manage the last-mile challenge.

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[180] Ethan Baron, *Amazon looks at dropping packages onto your patio from as high as 25 feet* (14 March 2018) The Seattle Times. <https://www.seattletimes.com/business/amazon-looks-at-dropping-packages-onto-your-patio-from-as-high-as-25-feet/>.
[181] David Grossman, *Amazon's Latest Bonkers Patent is for Underwater Warehouses* (26 July 2017) Popular Mechanics <https://www.popularmechanics.com/technology/design/a27498/amazon-patents-underwater-warehouses/>.
[182] Ibid.
[183] Patrick Caughill, *Amazon drone designed to self-destruct in emergencies. Here's why.* (5 December 2017) NBC News <https://www.nbcnews.com/mach/science/amazon-drone-designed-self-destruct-emergencies-here-s-why-ncna826246>.

Introduction

Retail is in the midst of fundamental change. With Australian eCommerce sales set to top $30.3 billion in 2019,[184] up 15.7% year-on-year,[185] bricks-and-mortar retailers must be prepared to compete online and offer delivery options for customers. Delivery presents a particular challenge as the last-mile to a customer can make up to 75% of the total cost of moving goods.[186] Yet Australians are demanding, 85% expect delivery within 3 days,[187] 38% would stop purchasing from a retailer after a negative delivery,[188] and 61% would select a retailer based on delivery options.[189]

Faced with this imperative, retailers need robust models to fully evaluate the options available. However, many of the commonly-used models share a problematic assumption – the last-mile as static and controllable. To overcome this, retailers should look to understand and apply a complex adaptive systems framework.

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[184] Statista, *eCommerce: Australia* (2019) Statista <https://www.statista.com/outlook/243/107/ecommerce/australia>.
[185] Ibid.
[186] Cathy Macharis and Sandra Melo, *City Distribution and Urban Freight Transport: Multiple Perspectives* (Edward Elgar Publishing, 1st Edition, 2011) p60.

[187] Emma Koehn, *The Last Mile: Why Australian Shoppers won't see same-day delivery from Amazon for years to come* (4 December 2017) Smart Company <https://www.smartcompany.com.au/industries/retail/australian-shoppers-wont-see-amazon-same-day-delivery-for-y-ears/>.

[188] LTX Solutions, *Last Mile Technology* (2019) LTX Solutions <http://ltxsolutions.com/last-mile-technology/>.
[189] Ibid.

Existing Models

Bricks-and-mortar retailers faced with the eCommerce imperative will often apply the following two models.

Extending the Supply-Chain

The framework proposed by Boyer, Frohlich and Hult,[190] is the most commonly applied for last-mile logistics.[191] It separates two decisions resulting in four distinct options:

	Semi-Extended Supply Chain	Fully-Extended Supply Chain	Decoupled Supply Chain	Centralized Extended Supply Chain
Q1. Where is the Order Picked?	Retail location	Retail location	Warehouse	Warehouse
Q2. Who Delivers?	Third-party	In-house	Third-party	In-house
Australian Example	JB Hi-Fi	Woolworths Online	Ikea Australia	Appliances Online

Figure 1
(Authors Own)

Quantifying these options becomes difficult due to the confidentiality of operating costs. However, Figure 2 has indexed these four models from publicly available data from Australia and overseas:[192]

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[190] Kenneth Karel Boyer, Markham T. Frohlich & G. Thomas M. Hult, *Extending the Supply Chain: How cutting-edge companies bridge the critical last mile into customers' homes* (New York: American Management Association, 1st Edition, 2005).
[191] Cathy Macharis and Sandra Melo, *City Distribution and Urban Freight Transport: Multiple Perspectives* (Edward Elgar Publishing, 1st Edition, 2011) p58.

[192] Jessica Twentyman, *Delivery charges cost online retailers dear* (18 November 2015) Financial Times <https://www.ft.com/content/fd88f556-70bc-11e5-9b9e-690fdae72044>; Chelsea White, *The Rising Costs of Fulfillment: A Hidden Cost of the Omnichannel Model* (28 August 2017) IBM Watson Customer Engagement <https://www.ibm.com/blogs/watson-customer-engagement/2017/08/28/rising-costs-fulfillment/>; Deborah Abrams Kaplan, *The real cost of e-commerce logistics* (6 June 2017) Supply-Chain Dive <https://www.supplychaindive.com/news/amazon-effect-logistics-cost-delivery/444138/>; Patrick Hatch, *Why shopping online at Coles is more expensive than in stores* (13 April 2016) Sydney Morning Herald <https://www.smh.com.au/business/companies/why-shopping-online-at-coles-is-more-expensive-than-in-stores-20160412-go45mz.html>; Krista Fabregas, *Order Fulfillment Costs: Fulfillment Services & 3PL Costs Explained* (18 January 2019)

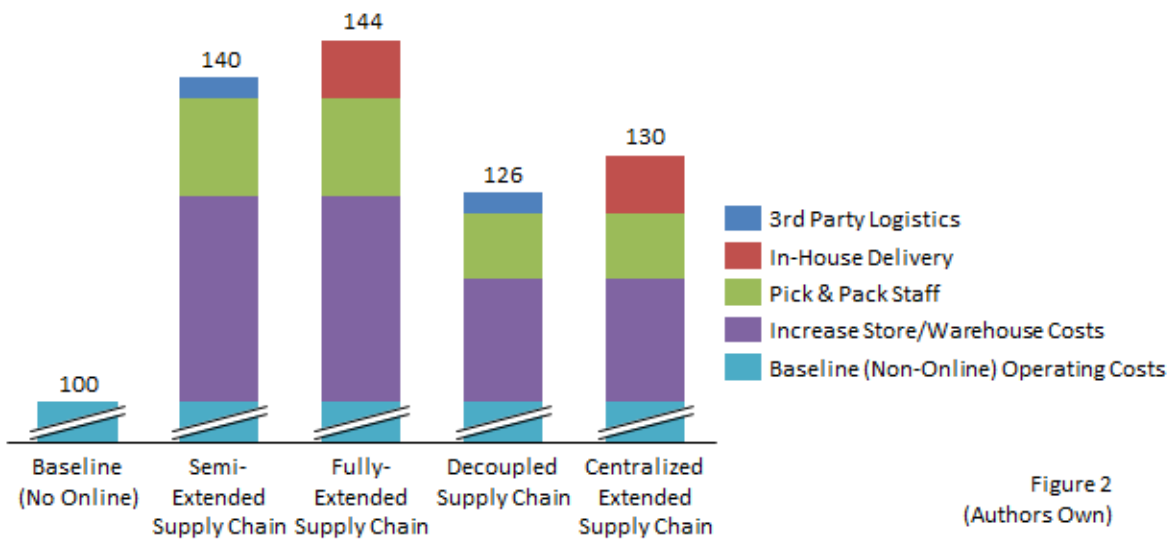

Figure 2
(Authors Own)

Importantly, even choosing the most cost-effective option (Decoupled Supply-Chain) increases fulfilment cost for an online order 26%. Adding this pressure to already squeezed margins can often create a negative overall margin, harming profitability.

Diversity of Options

Given the variety of ways retailers can deliver to customers, Boyer's model can be overly simplistic. As such, Blauwens, De Baere and Van de Voorde laid out a function for calculating delivery cost:[193]

<https://fitsmallbusiness.com/order-fulfillment-costs/>; eStore Logistics, *What's the Average Cost per Order from a Fulfillment Company in Australia* (8 December 2018) eStore Logistics <https://www.estorelogistics.com.au/average-cost-per-order-from-a-fulfillment-company/>; Russ Meller, *Order Fulfillment as a Competitive Advantage* (5 March 2015) Supply Chain 24/7 <https://www.supplychain247.com/article/order_fulfillment_as_a_competitive_advantage>.

[193] Gust Blauwens, Peter De Baere & Eddy Van de Voorde, *Transport Economics* (De Boeck Publishing, 4th Edition, 2010).

$$\boldsymbol{TC = T * t + D * d + Z}$$

Where:

- TC stands for total transportation cost
- T stands for the duration/time of the transport
- t stands for the time/hour coefficient
- D stands for the distance driven/travel for the transport
- d stands for the distance coefficient
- Z stand for extra costs not related to distance and/or time (e.g. signature required, returns etc.)

Figure 3

Applying this function to last-mile delivery in Belgium, Gavaers demonstrated the effect of different variables .[194] Using a baseline of home delivery by van costing €3.87/delivery:

- Offering a 1-hour delivery window increased to €8.14/delivery
- Doubling route density decreased to €2.96/delivery
- Not requiring a signature decreased to €2.91/delivery
- Using cargo bikes rather than vans decreased to €1.60/delivery
- Delivering to parcel lockers decreased to €1.16/delivery

In this way, Blauwens' function is more robust and allows retailers to model all the delivery options available. However, it assumes a static and controllable environment in which retailers can invest. This essay will step through why that is an issue.

[194] Roel Gevaers, Eddy Van de Voorde & Thierry Vanelslander, 'Cost Modelling and Simulation of Last-mile Characteristics in an Innovative B2C Supply Chain Environment with Implications on Urban Areas and Cities' (2014) 125 *Procedia – Social and Behavioural Sciences* 398, 407-410.

Last-Mile as a Complex Adaptive System

Viewing the last-mile as static and controllable will lead to suboptimal outcomes. This is because calculations of profitability and suitability are reliant on external factors that react and adapt in ways that cannot be forecast. Accordingly, retailers that understand their last-mile networks as complex adaptive systems will be best placed to avoid overinvestment or compromising their bricks-and-mortar business.

Complex Adaptive Systems

Complex adaptive systems are common in human society, such as economies,[195] and political parties.[196] They can be broken into two parts:

- **Complex** systems are comprised of interactions between entities that are not centrally controlled. The interactions between these entities and the broader environment create the organisation and structure in the system.[197]
- **Adaptive** systems are made up of entities that learn from experience and responds to other entities.[198]

To illustrate the distinction, a weather cycle is a complex system with interacting sub-systems and no central control. However, it lacks the learning property and is therefore not adaptive.[199]

Supply-chains in general, and last-mile ecosystems in particular, are complex adaptive systems. They contain webs of interactions between various retailers, manufacturers, distributors, logistics providers, technology developers and customers in the form of

[195] Herbert Gintis, *The Economy as a Complex Adaptive System* (2006) Semantic Scholar <https://pdfs.semanticscholar.org/dd49/7297c0745c744f07abb9da632439fe748bb5.pdf>.
[196] Hilton L. Root and James D. Wright, 'The State as a Complex Adaptive System' (2015) 2 *International Encyclopaedia of Social and Behavioural Sciences* 368, 368-370.
[197] Amit Surana et al, 'Supply-Chain Networks: A complex adaptive systems perspective' (2005) 43(20) *International Journal of Production Research* 4235, 4237.
[198] Amit Gupta and S. Anish, *Insights from Complexity Theory: Understanding Organizations Better* (2014) IIMB Management Review <http://tejas.iimb.ac.in/articles/12.php>.
[199] Ibid.

exchanges of information, products or finances.[200] From these interactions – both cooperative and competitive – the system as a whole self-organises and continues to adapt.

> *A supply-chain is a complex network with an overwhelming number of interactions and inter-dependencies among different entities, processes and resources. The network is highly nonlinear, shows complex multi-scale behaviour, has a structure spanning several scales, and evolves and self-organizes through a complex interplay of its structure and function. This sheer complexity of supply-chain networks, with inevitable lack of prediction, makes it difficult to manage and control them*.[201]

Any attempt to manage and control can create unexpected effects in other parts of the system (the Law of Unintended Consequences).[202] Supply-chains in particular are also subject to altering boundaries of the network,[203] as different technologies, connections and competitors alter what is possible within the system. As such, any attempt to control the development of the last-mile ecosystem is fraught.

Case Studies

The adaptation can be seen on both a macro and micro level. Macro-level change is driven by large disruptions that force the whole system to adapt, whereas micro-level changes are individual retailer specific. One example of each is set out below.

Macro-Level

The American experience demonstrates system-wide changes driven by factors outside retailers' control.

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[200] Amit Surana et al, 'Supply-Chain Networks: A complex adaptive systems perspective' (2005) 43(20) *International Journal of Production Research* 4235, 4239.
[201] Ibid, 4235-4236.
[202] M. San Miguel, *Challenges in complex systems* science (2012) 214 *The European Physical Journal Special Topics* 245, 248-250.
[203] Amit Surana et al, 'Supply-Chain Networks: A complex adaptive systems perspective' (2005) 43(20) *International Journal of Production Research* 4235, 4241.

- **Rise of Home Delivery** – Spurred by the technological development of railways,[204] and the regulatory change of Rural Free Delivery by the US postal service,[205] the calculus of last-mile delivery changed in the mid-1800's. Retailers such as Montgomery Ward and Sears came to dominate American retail by offering great range and pricing while being able to cost-effectively deliver to a customer's door.
- **Big Box Retail** – Post-1950, technology in the form of mass-produced automobiles (78.5% of households owned a car by 1960,[206]) and new infrastructure in the interstate highway system,[207] led to the development of big box retailers. In 1962 alone, Wal-Mart, K-Mart and Target were all founded in the US, as the last-mile was travelled by customers attracted to convenient locations and ample parking more suited to the larger basket sizes of these new retailers.

Currently the system is adapting on a macro-level as the convenience, range and pricing of eCommerce shifts volume away from physical retailers. Once again, home delivery is emerging.

Micro-Level

Amazon's experience in the US demonstrates the factors outside even the largest retailer's control:

- **Reliance** – The UPS Christmas Fiasco of 2013 demonstrated the poor customer service and unbudgeted costs that can result from reliance on third-parties.[208]

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[204] Ernie Smith, *How Sears and Montgomery Ward Changed American Shipping* (21 February 2017) Atlas Obscura <https://www.atlasobscura.com/articles/sears-postal-service-catalogs>.
[205] Encyclopaedia Britannica, *Rural Free Delivery* (2019) Encyclopaedia Britannica <https://www.britannica.com/topic/Rural-Free-Delivery>.
[206] Bureau of Transportation Statistics, *Figure 2-8 Household Vehicle Ownership: 1960-2013* (21 May 2017) U.S. Department of Transportation <https://www.bts.gov/archive/publications/passenger_travel_2016/tables/fig2_8_text>.
[207] Richard F. Weingroff, *Federal-Aid Highway Act of 1956: Creating the Interstate System* (1996) U.S. Department of Transportation <https://www.fhwa.dot.gov/publications/publicroads/96summer/p96su10.cfm>.
[208] Amrita Jayakumar, *Amazon, UPS offer refunds for Christmas delivery problems* (26 December 2013) Washington Post <https://www.washingtonpost.com/business/economy/amazon-ups-offer-refunds-for-christmas-delivery-problems/2013/12/26/c9570254-6e44-11e3-a523-fe73f0ff6b8d_story.html>.

- **Competition** – Amazon Flex's introduction alongside uberRUSH, Deliv, and others lead to a fragmented delivery market, increasing cost of labour and destroying route density assumptions.[209]
- **Regulation** – Amazon's investment in drone delivery continues to be thwarted by the FAA's 'Small UAS Rule'. Expectations of relief in 2018 were not met, despite competitors such as Alphabet, Apple and Microsoft being granted exemptions, continuing to thwart Amazon's investment in this technology.[210]
- **Reaction** – After Walmart introduced free 2-day shipping for orders over $35 in 2017, and Target matched in 2018, Amazon then offered free 1-day shipping for all orders in Christmas 2018. This competitive reaction from Amazon and Target undermined Walmart's original modelling.[211]

[209] Roger Aitken, *UberRUSH and Shyp's 'On-Demand' Express Delivery Demise Begs Uberfication Questions* (12 April 2018) Forbes <https://www.forbes.com/sites/rogeraitken/2018/04/12/uberrush-shyps-on-demand-express-delivery-demise-begs-uberfication-questions/#6a62fdb74fe8>.
[210] CNBC, *Alphabet, Apple and Microsoft will be part of government drone pilots, but Amazon was left out* (10 May 2018) CNBC <https://www.cnbc.com/2018/05/09/alphabet-apple-microsoft-part-of-usdot-drone-pilots-amazon-bypassed.html>.
[211] George Anderson, *Did Amazon just crush Target and Walmart's free holiday shipping moves* (5 November 2018) Retail Wire <https://www.retailwire.com/discussion/did-amazon-just-crush-target-and-walmarts-free-holiday-shipping-moves/>.

Looking Ahead

The last-mile system appears likely to continue to be driven by factors outside any one retailer's control.

Crowdsourced Delivery

Delivery off a lower cost base will be enabled by crowdsourcing couriers. Platforms such as Deliv,[212] and Roadie,[213] are seen as answering "the growing customer expectations for faster, more personalized, and cost-efficient service."[214] In Australia, retailers are realising crowdsourcing offers a capital-light option for efficient delivery, notably seen in Coles Supermarket's partnerships with UberEATS,[215] and AirTasker.[216]

Advanced algorithms and artificial intelligence will allow these platforms to further undercut third-party logistics providers and retailers' in-house delivery services. Unburdened by the high-fixed costs of traditional logistics businesses, these crowdsourcing platforms can adapt faster to developing technology. In this way, they threaten the incumbent that invests too heavily in their own delivery fleet.

Rise of Robots

Slated to reduce both capital and operating costs, robots and drones promise to usher in a new generation of logistics providers. While drones have become the technology synonymous with the future of last-mile delivery, ground-based delivery robots appear to be leading the charge towards commercialisation.

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[212] Deliv <https://www.deliv.co/>.
[213] Roadie <https://www.roadie.com/>.
[214] Hau L. Lee et al, *Technological Disruption and Innovation in Last-Mile Delivery* (June 2016) Stanford Business School, 5 <https://www.gsb.stanford.edu/sites/gsb/files/publication-pdf/vcii-publication-technological-disruption-innovation-last-mile-delivery.pdf>.
[215] Matthew Elmas, *Coles will bring supermarket roast chickens to UberEats as competition heats up* (29 January 2019) Smart Company <https://www.smartcompany.com.au/industries/retail/coles-will-bring-supermarket-roast-chickens-to-ubereats-as-competition-heats-up/>.
[216] Airtasker, *Join the Coles Shop and Deliver trial* (2019) Airtasker <https://www.airtasker.com/coles-how-it-works/>.

Each technology offers far lower operating costs than traditional delivery, with delivery robots estimated at less than $1/delivery,[217] and drones at $0.88.[218] Importantly, this modelling assumes multiple machines per human operator. Where a 1:1 operator-to-drone ratio is assumed, it results in approximately 11x higher cost.[219]

Autonomous Vehicles

The cost differential in drone modelling illustrates why autonomous vehicles will prove transformational. Offering better unit economics, autonomous vehicles will be 10-40% cheaper to operate,[220] and without the constraint of driver fatigue will be subject to less down-time.[221]

Google has noted that "the two largest commercial delivery services in the U.S. operate over 100,000 last-mile vehicles — each requiring a human operator."[222] If autonomous vehicles are commercialised, these companies will be left with over 100,000 assets that operate off too high a cost base. Demand for these deliveries will shift to cheaper autonomous options (McKinsey estimate in a decade 80% of deliveries will be autonomous),[223] and these commercial delivery services will be left with stranded assets.

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[217] Andy Meek, *The robots are coming (to deliver your groceries)* (31 January 2017) BGR Media <https://bgr.com/2017/01/31/robot-delivery-pizza-starship-technologies/>.
[218] Hau L. Lee et al, *Technological Disruption and Innovation in Last-Mile Delivery* (June 2016) Stanford Business School, 13 <https://www.gsb.stanford.edu/sites/gsb/files/publication-pdf/vcii-publication-technological-disruption-innovation-last-mile-delivery.pdf>.
[219] Ibid.
[220] Jurgen Schroder et al, *Fast Forwarding Last-Mile Delivery – Implications for the Ecosystem* (August 2018) McKinsey & Co, 8 <https://www.mckinsey.com/~/media/McKinsey/Industries/Travel%20Transport%20and%20Logistics/Our%20Insights/Technology%20delivered%20Implications%20for%20cost%20customers%20and%20competition%20in%20the%20last%20mile%20ecosystem/Fast-forwarding-last-mile-delivery-Implications-for-the-ecosystem.ashx>.
[221] Fortune, *Why Self-Driving Vehicles Are Going to Deliver Pizzas Before People* (13 March 2018) Fortune <http://fortune.com/2018/03/13/self-driving-delivery-vehicles-pizza/>.
[222] Hau L. Lee et al, *Technological Disruption and Innovation in Last-Mile Delivery* (June 2016) Stanford Business School, 17 <https://www.gsb.stanford.edu/sites/gsb/files/publication-pdf/vcii-publication-technological-disruption-innovation-last-mile-delivery.pdf>.
[223] Fortune, *Why Self-Driving Vehicles Are Going to Deliver Pizzas Before People* (13 March 2018) Fortune <http://fortune.com/2018/03/13/self-driving-delivery-vehicles-pizza/>.

Autonomous vehicles operate today, with Waymo's Uber-like passenger service in Arizona.[224] It is only a matter of time before this technology is commercialised for retail. Domino's Pizza partnered with Ford to trial autonomous deliveries,[225] and grocery giants Walmart and Kroger are each trialling autonomous deliveries in Arizona.[226]

Autonomous technology also offers the possibility of radically reshaping the last-mile. Shoppers may send their car to retail locations, an innovation currently being explored by Waymo and Walmart.[227] More transformational, start-ups Robomart,[228] and Wheely's,[229] are developing bus-like grocery stores on wheels, allowing the retailer to send the whole store to a customer's door.

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[224] Michael Laris, *Waymo launches nation's first commercial self-driving taxi service in Arizona* (5 December 2018) Washington Post <https://www.washingtonpost.com/local/trafficandcommuting/waymo-launches-nations-first-commercial-self-driving-taxi-service-in-arizona/2018/12/04/8a8cd58a-f7ba-11e8-8c9a-860ce2a8148f_story.html?utm_term=.be9f50c70373>.

[225] Phil LeBeau, *Ford teams with Domino's, Postmates in Miami to test delivery via autonomous vehicles* (27 February 2018) CNBC <https://www.cnbc.com/2018/02/27/ford-teams-with-dominos-to-test-deliveries-by-autonomous-vehicles.html>.

[226] Timothy B. Lee, *Walmart trials new self-driving delivery service in Arizona* (10 January 2019) ARS Technica <https://arstechnica.com/cars/2019/01/walmart-pilots-self-driving-grocery-deliveries-in-the-phoenix-area/>; Russell Redman, *Kroger goes live with self-driving delivery vehicles* (December 2018) Supermarket News <https://www.supermarketnews.com/online-retail/kroger-goes-live-self-driving-delivery-vehicles>.

[227] Makena Kelly, *Waymo partners with Walmart to test grocery pickup service in Arizona* (25 July 2018) The Verge <https://www.theverge.com/2018/7/25/17611760/waymo-walmart-self-driving-vehicles-groceries-discounts>.

[228] Abhishek Sengupta, *World's first driverless grocery store in Dubai soon?* (16 October 2018) Khlaeej Times Dubai <https://www.khaleejtimes.com/technology/worlds-first-driverless-grocery-store-in-dubai-soon>.

[229] Matt Burgess, *China now has a robo-grocery store that will drive to your door* (16 June 2017) Wired <https://www.wired.co.uk/article/moby-autonomous-shopping-store>.

Recommendations

At this point, retailers could be forgiven for feeling a sense of hopelessness. If the last-mile ecosystem is constantly adapting it becomes near impossible to rationalise long-term investment. Yet last-mile options are something customers demand.

In this context, this essay has four recommendations focused on mitigating the stranded asset risk and maximising system flexibility.

Recommendation 1: Model Whole Cost

While the system will continue to adapt, and options may only be modelled at a 'moment-in-time', retailers need to model their options available. Given the shortcomings of the two frameworks introduced at the start of this essay, retailers should instead use:

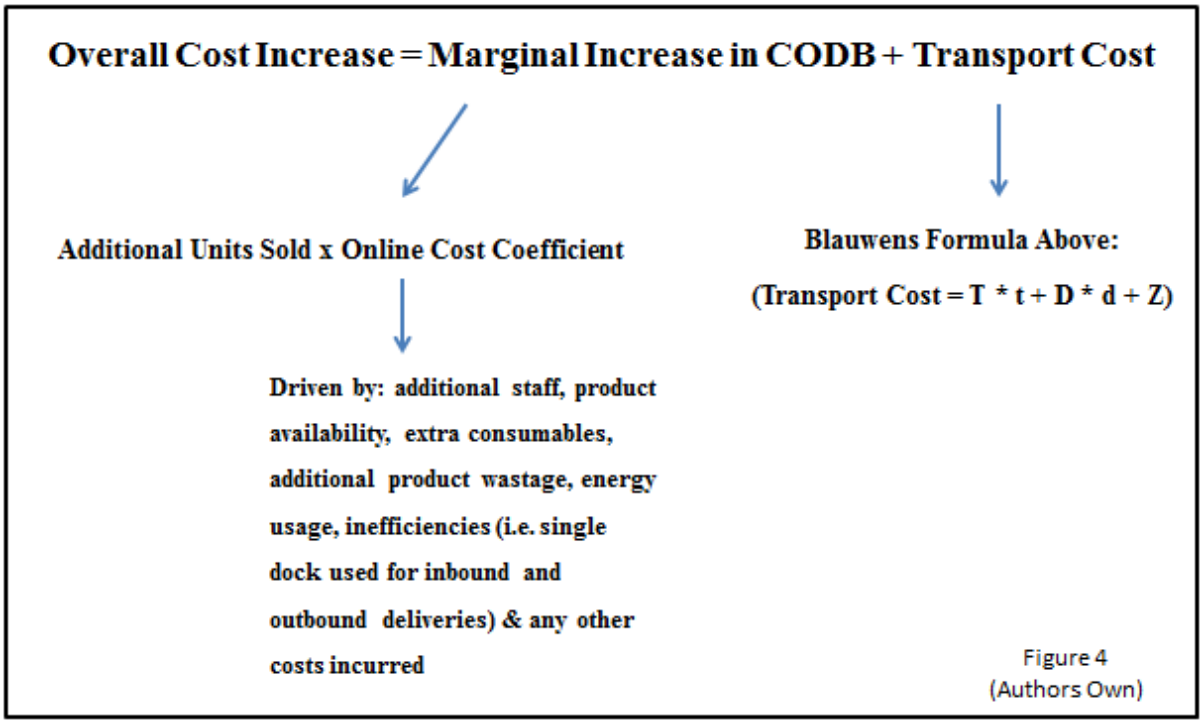

Figure 4
(Authors Own)

This function allows retailers to model the end-to-end cost impact of an online delivery. In particular, where the marginal increase in cost is higher than the margin on a product, retailers should be aware they are using their bricks-and-mortar operating profit to subsidise online deliveries. This is not a viable long-term pricing strategy and can undermine the viability of their bricks-and-mortar operations.

Recommendation 2: Allow last-mile infrastructure to evolve

By viewing last-mile logistics as a complex adaptive system, retailers must accept they cannot predict and centrally control the development of last-mile logistics infrastructure. Instead, retailers should lean into the adaptive nature of this system. As Lissack explains:

> *For 50 years organization science has focused on "controlling uncertainty." For the past 10 years complexity science has focused on how to understand it so as to better "go with the flow" and perhaps to channel that flow.*[230]

In practice this means retailers should:

- Diversify last-mile options available to customers
- Allocate resources dynamically as demand shifts
- Avoid building in-house what can be achieved through partnerships
- Find ways to realise benefits of new technology without heavy capital investment
- Ensure any investment is adaptable to changes in market conditions

In effect, retailers should strive for a last-mile logistics networks that is, "highly dynamic, scalable, reconfigurable, agile and adaptive: the network should sense and respond effectively and efficiently to satisfy customer demand."[231] Retailers that strive for such results will be better placed to manage the nature of the system than those that try to design, implement and control their last-mile infrastructure.

Recommendation 3: Avoid unnecessary capital investments

Given the pace of change underway, and the adaptive nature of the logistics industry, overinvesting in delivery infrastructure would be a mistake. Bricks-and-mortar retail is a

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[230] Michael Lissack, 'Complexity: The science, its vocabulary, and its relation to organizations' 1 *Emergence: Complexity and Organization* 115, 120.
[231] Amit Surana et al, 'Supply-Chain Networks: A complex adaptive systems perspective' (2005) 43(20) *International Journal of Production Research* 4235, 4236.

capital-intensive business at the best of times, meaning retailers do not have the operating margins to misallocate capital. Instead retailers should seek partnerships that reduce their need to invest capital in the last mile.

Australian supermarkets offer a case study of different approaches – where Coles has pursued partnerships with UberEATS and Airtasker, Woolworths has focused on in-house delivery capacity.[232] Woolworths' investment carries too high an opportunity cost, and risks creating stranded assets as last-mile technologies continue to develop. By avoiding overinvestment in last-mile infrastructure Coles can outsource delivery and reallocate capital to core business – curating the right product offer and investing in price.

Recommendation 4: Shorten the Last-Mile

The final recommendation of this essay is to find ways to shorten the distance between retailer and customer. Using frameworks such as Eli Goldratt's *Theory of Constraints*,[233] retailers should be constantly seeking out bottlenecks to reduce the time and expense it takes for goods to reach their customer.

If delivery vehicle capacity is a system constraint, retailers should use several couriers as The Iconic utilises Australia Post, DHL, Seko Logistics and Couriers Please.[234] If the constraint is order picking, organisations should look to alleviate this bottleneck in the way Airtasker picks orders for Coles.[235] If the constraint is click-and-collect locker capacity, retailers should incentivise quicker collection of parcels to maximise throughput. This constant focus on reducing constraints will improve cost per delivery, delivery times and customer satisfaction.

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[232] Matthew Elmas, *Coles will bring supermarket roast chickens to UberEats as competition heats up* (29 January 2019) Smart Company <https://www.smartcompany.com.au/industries/retail/coles-will-bring-supermarket-roast-chickens-to-ubereats-as-competition-heats-up/>.
[233] Lean Production, *What is the Theory of Constraints* (2019) Vorne Industries <https://www.leanproduction.com/theory-of-constraints.html>.
[234] Simon Evans and Jenny Wiggins, *Last mile: Amazon ups ante for online shopping as Australia Post aims to deliver* (8 December 2017) <https://www.afr.com/business/retail/last-mile-amazon-ups-ante-for-online-shopping-as-australia-post-aims-to-deliver-20171206-gzzu6p>.
[235] Airtasker, *Join the Coles Shop and Deliver trial* (2019) Airtasker <https://www.airtasker.com/coles-how-it-works/>.

Conclusion

Bricks-and-mortar retailers face an existential crisis. The rise of eCommerce has forced them to consider becoming omnichannel retailers. For those that do, an understanding of the last-mile as a constantly evolving system shaped by forces outside their control is crucial. Rather than attempting to extend their vertically integrated supply-chain to the customer's door, retailers must focus on building partnerships, diversifying delivery options and developing feedback loops. In particular they must be able to quantify the true cost of delivery and insure against subsidising online delivery with bricks-and-mortar profit. By doing so retailers can maximise their routes to customer without compromising their bricks-and-mortar business.

Joe Berry Award Essay 2019

Topic 3 – Managing the "Last Mile" Problem

Q. The most suitable and profitable eCommerce delivery models for Australia are debatable. The best models might be to the front-door or front-of-store. Some delivery options may be detrimental to the viability of bricks & mortar retailers. How will the rise of eCommerce fuel this debate and what have we learned from overseas experience?

Entrant Number: JBA - 19-043

Kate Wright

Campbell Arnotts

Executive Summary

Rising consumer expectations and advancements in technology are transforming the eCommerce world. The competition is heating up as retailers battle it out to win consumer loyalty by providing the best ‘last mile’ solution.

This essay evaluates how the rise of eCommerce is transforming retail in Australia and that to meet consumer expectations, adopting an omnichannel retail strategy is key.

Three core principles are explored in this essay;

1) Omnichannel is the way forward for Australian retailers
2) Bricks and Mortar retail plays a strategic role in winning the last mile
3) Profitability is won preceding the last mile

This essay concludes by looking forward and recommending strategies for retailers to adopt to be most successful in delivering a last mile solution - one that meets consumer expectations whilst balancing internal commercial realities.

Introduction

"One thing I love about customers is that they are divinely discontent. Their expectations are never static – they go up."[236] Such is the harsh reality of consumer as described by Amazon founder, Jeff Bezos. The increase in expectations are putting pressure on retailers across the globe as they strive to provide outstanding end-to-end service for consumers.

For eCommerce retailers, the last mile challenge is where the retail battle can be won or lost. With the last mile accounting for +50% of the total package delivery cost,[237] it is not surprising that this part of the process is continually being disrupted. This has resulted in an explosion of new technologies and developments focused on making the last mile even more efficient and attempting to drive consumer loyalty in different ways.

The most desirable way to succeed is through an omnichannel strategy. At its core, this is about making it convenient for consumers to buy what they need, when and how they want – whether at the store or online, delivered to home or out-of-home.[238]

This essay explores the benefits of an omnichannel approach for Australia, the opportunities for bricks and mortar and the need for profitability to be part of the upfront strategy. These three principles will be explored in this essay along with considerations for last mile success into the future.

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[236] Amazon 'Annual Report' 2017

[237] https://www.mckinsey.com/industries/travel-transport-and-logistics/our-insights/how-customer-demands-are-reshaping-last-mile-delivery

[238] https://www.businessinsider.com.au/alibaba-hema-xiansheng-supermarket-whole-foods-amazon-future-2018-5

1) Omnichannel is the way forward for Australian retailers

The Australian online retail landscape is competitive with consumers demanding greater convenience, value and choice.[239] In 2018, Australians spent approx. $28.6 billion on online retail – equating to an 8.9% share of traditional bricks and mortar retail (valued at $320.1 billion).[240]

Understanding the most suitable eCommerce model for Australia involves an understanding of the geographical, economic and retail landscape. Australia has a low population density (3.2 people per square kilometre)[241] and some of the highest labour costs in the world.[242] These factors, coupled with low retail operating margins, creates a puzzle for the retailers to create the most suitable last mile solution.

To evaluate the most suitable eCommerce model for Australia, we first need to look at the dominant consumer frustrations. Taking a grocery retail lens, the top four frustrations include; high delivery costs (26%), not getting the products you have ordered and receiving an unsuitable replacement (19%), lack of freshness of food (16%) and uncertain delivery times with limited flexibility (12%).[243]

Looking at three of the delivery models used in Australia (figure 1), there is no one-size-fits all solution which addresses all the main consumer frustrations. The beauty is when they all can work together creating an omnichannel strategy to give consumers a solution which will deliver to their personal needs.

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[239] Australia Post Report, 'Inside Australian Online Shopping,' 2018 https://auspost.com.au/content/dam/auspost_corp/media/documents/2018-ecommerce-industry-paper-inside-australian-online-shopping.pdf

[240] NAB quarterly insights to Dec 2018 https://business.nab.com.au/nab-online-retail-sales-index-quarterly-update-december-2018-33296/

[241] Australian Bureau of Statistics 'Population density' 2018 https://www.abs.gov.au/

[242] Labour costs in Australia compared to other countries, 17 June 2015 https://www.businessinsider.com.au/chart-labour-costs-in-australia-compared-to-other-countries-2015-6

[243] Canstar Blue, 'Online grocery shopping: Coles vs Woolworths' September 2018 https://www.canstarblue.com.au/stores-services/online-grocery/

MAIN CONSUMER FRUSTRATIONS	DELIVERY COSTS 26%	CORRECT ORDER 19%	FRESHNESS 16%	UNCERTAIN TIMING 12%	FUTURE SUCCESS
Home Delivery					✓
Out-Of-Home Delivery *(pick up instore, locker)*	✓		✓	✓	✓
On Demand			✓	✓	

Figure 1: Evaluating effectiveness of grocery delivery models in addressing consumer frustrations[244]

Acknowledging that one delivery option is not effective in isolation, Australian retailers are following in the footsteps of their global counterparts, experimenting with a diverse range of last mile solutions. In a personal interview, Ian Kerr, founder of 'The Postal Hub Podcast' states that "E-commerce shoppers demand options and control over their deliveries, so the main goal for retailers should be to offer a range of delivery options to consumers."[245] Without these options, it can lead to consumers abandoning shopping carts altogether.[246]

In the Australian market, Coles has publicly stated their commitment to an omnichannel strategy 'offer anytime, anywhere shopping' with a focus on out-of-home and in-home last mile solutions (figure 2).[247]

[244] Visual representation of how delivery models address consumer frustrations using Canstar Blue research https://www.canstarblue.com.au/stores-services/online-grocery/
[245] Ian Kerr, Personal interview, 19 February 2019
[246] The PostHub Blog post http://www.thepostalhub.com/blog/2016/01/21/e-commerce-second-wave-customer-experience 21 January 2016
[247] Westfarmers Annual Report 2018 https://www.wesfarmers.com.au/docs/default-source/reports/wes18-044-2018-annual-report.pdf?sfvrsn=4

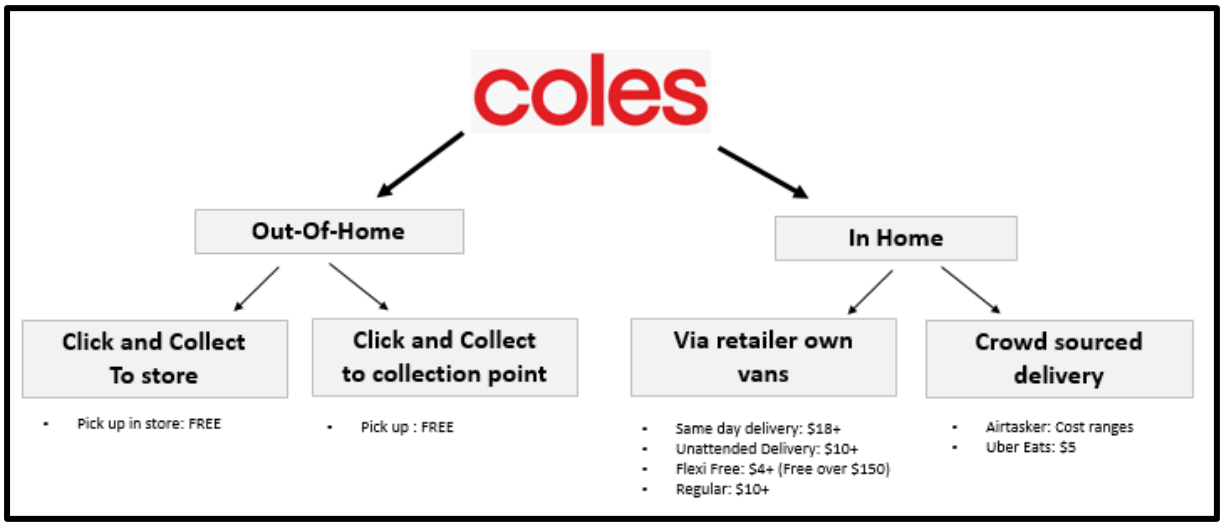

Figure 2: Visual representation of the Coles Omnichannel strategy[248]

A key part of the Coles omnichannel strategy is their out-of-home click and collect service. Coles is seeing growth in this channel with click and collect now representing +25% of all online sales.[249]

Trialling of crowd sourced delivery models has also been adopted. Coles has established a partnership with Uber Eats - enabling Shoppers access to their ready-to-eat meals delivered via the Uber Eats app.[250] Whilst a smaller part of the omnichannel strategy, crowd sourced delivery is gaining popularity due to the speed in which the contract driver can pick up and deliver an order - often within two hours.[251] We can expect further adoption of crowd sourced deliveries as retailers use this model to test and learn.

Globally, the omnichannel approach has been a focus for Chinese technology giant, Alibaba. They have aggressively expanded their physical store presence with the roll-out of supermarket chain, “Hema Xiansheng.” With the first store launching in 2015, Hema acts as a centralised smart warehouse to address last mile challenges and a futuristic supermarket where consumers can shop, eat and experience a new

[248] Visual representation using information sourced from https://shop.coles.com.au/
[249] IRI, ‘Grocery Market Moves’ January 2019
[250] Uber Eats Australia ‘Good things at a touch of a button,’ 28 January 2019 https://www.uber.com/en-AU/newsroom/ubereatscoles/
[251] IRI, ‘Grocery Market Moves’ January 2019

style of retail. Alibaba founder, Jack Ma, states, “E-commerce is rapidly evolving into 'New Retail.' The boundary between offline and online commerce disappears as we focus on fulfilling the personalized needs of each customer."[252]

Every Hema stores doubles as a physical store and a distribution centre playing an integral part in the last mile solution. Consumers have the choice of various shopping and collecting methods from instore pick up to home delivery. Orders are fulfilled by Hema employees who “shop” the store looking for products. Once an order is received, the order is then bagged and sent via conveyor belts (figure 3) to the delivery centre next door. Hema’s sophisticated IT systems create algorithms to plan the best delivery route and ship the order to the consumer’s home in less than 30 minutes (within 3 kilometres of a store).[253]

A key part of the Hema strategy is about understanding their consumer. They have used these insights to build solutions across all touchpoints to ensure a frictionless experience end-to-end.

Figure 3: A customer order traveling via a conveyor belt to the delivery centre.[254]

[252] Alizila ‘2017 letter to shareholders from Executive Chairman Jack Ma,’ 17 October 2017 https://www.alizila.com/2017-letter-shareholders-executive-chairman-jack-ma/
[253] *Ibid.*
[254] *Ibid.*

2) Bricks and Mortar retail plays a strategic role in winning the last mile

Now is the time for bricks and mortar reinvention. With a focus on omnichannel strategies, bricks and mortar retailers are in an advantageous position to use their physical footprint to succeed in the last mile. Two areas where this can be achieved are by driving consumer loyalty through brand experience and using the physical space to create an instant distribution centre and collection point.

i. Consumer loyalty through brand experience

As outlined through the Hema example, bricks and mortar retailers can leverage their physical footprint to offer consumers a brand experience which is difficult to replicate online. Nike has successfully demonstrated this with the launch of "House of Innovation 000," their flagship store in New York City. Designed to offer personalisation (figure 4) and be as responsive as digital, the merchandise instore is continually refreshed based on online sales in that area. Further brand experiences are available for NikePlus members which is a free membership service. Members can use the Nike app to browse merchandise online, reserve items via the app and have them held in an in-store locker, ready for pickup whenever is convenient (figure 5).[255]

Figure 4: Nike Shoe personalisation[256]

Figure 5: Dedicated collection point[257]

[255] Nike Newsroom 'Nike's new NYC flagship is the face of living retail,' 14 November 2018, https://news.nike.com/news/nike-nyc-house-of-innovation-000
[256] *Ibid.*
[257] *Ibid*.

In this example, Consumer loyalty is encouraged through the NikePlus membership service and the constantly evolving instore brand experience – merging the best of online and offline.

Bricks and mortar retail is a significant part of the eCommerce landscape. The focus for retailers who have a physical presence is to create strategies that use this to their advantage.

ii. An instant distribution centre and collection point

The second consideration for bricks and mortar retail is using the physical space as a distribution centre or a collection point for out-of- home delivery. This may take the form of a 'dark store' whereby the warehouse is designed to mimic that of an instore environment and used to facilitate out-of-home collections,[258] or as a distribution centre for online orders.

With click and collect in the UK expected to rise by 45% by 2023, UK retailers are already on the front foot transforming and redesigning their stores to cater for additional collection points.[259]

This has been a focus for UK retailer, Asda, with the launch of a diverse range of collection options (figure 6) including the launch of the Asda "To You" Service (figure 7). The Asda "To You" service is located at the entrance to select Asda stores and gives consumers the ability to collect or return online orders all within less than 60 seconds.

[258] Pas Tomasiello 'Addressing the challenges of grocery retail,' 25 September 2018 https://www.foodprocessing.com.au/content/business-solutions/article/addressing-the-challenges-of-grocery-retail-1235278768

[259] Ruth Hogan 'UK's click and collect to grow by 45 percent in the next five years,' 8 February 2019 https://insidefmcg.com.au/2019/02/08/uks-click-collect-to-grow-by-45-per-cent-in-the-next-five-years/

Figure 6: Asda out-of-home options[260]

Figure 6: Asda 'To You' Tower[261]

Click and collect is an effective way bricks and mortar retailers can use their physical footprint to succeed in the last mile. This model offers benefits for both the consumer and the retailer:

Consumer benefits:

- Free delivery
- Reduced waiting periods - especially pertinent during busy retail periods such as Christmas.[262]
- Guaranteed first delivery

Retailer benefits;

- Reduced delivery costs, reducing the last mile burden (figure 8)
- Driving consumer loyalty
- Opportunity for incremental sales, when the consumer is collecting goods in the store.[263]

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[260] 'Asda click and collect' https://www.asda.com/click-and-collect/
[261] *Ibid.*
[262] 'Why retailers want you to click and collect,' 30 August 2017 https://insidefmcg.com.au/2017/08/30/why-retailers-want-you-to-click-and-collect/
[263] *Ibid*

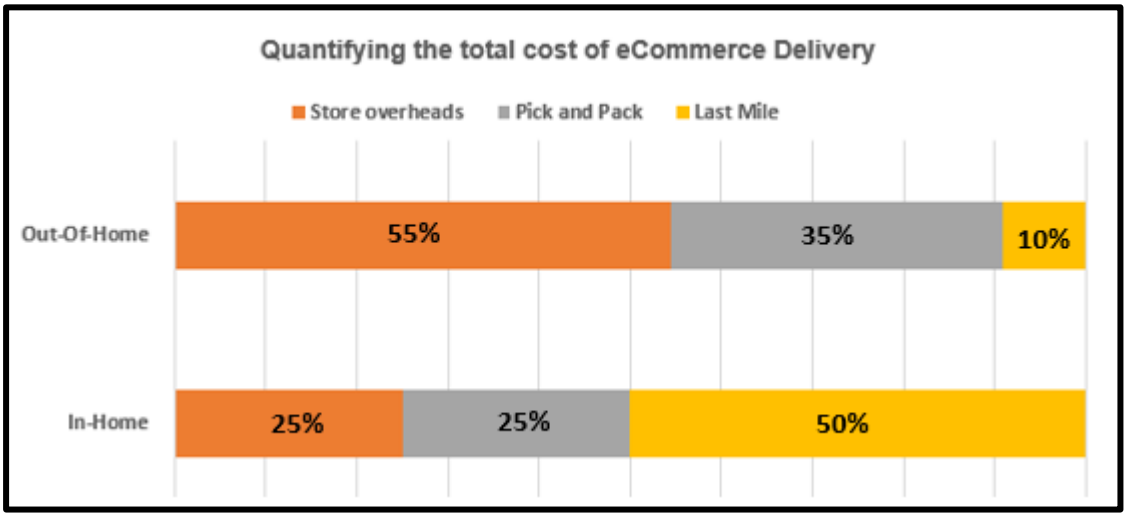

Figure 8: Breakdown of costs out-of-home vs in-home delivery[264]

The above graph is an estimation of the breakdown of costs between out-of-home (click and collect) and in-home delivery. Through analysis of research papers, the conclusion is that out-of-home is the most efficient when it comes to last mile costs. However, with this model store overheads and the picking and packing of orders is likely to be higher. Therefore, it is imperative retailers focus is on reducing costs and improving efficiencies prior to the last mile.

3) Profitability is won preceding the last mile

The challenge for retailers is the desire to meet consumer expectations whilst balancing commercial realities – the profit line. As highlighted earlier, cost of delivery is the number one consumer frustration for grocery online orders[265] and 65% of Australian consumers have abandoned an online shopping cart once they were aware of the high delivery costs.[266]

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[264] Visual representation using various research papers; Alvarez and Marsal 'Home Delivery Fulfilment in UK Grocery' 30 June 2016, 'Why retailers want you to click and collect,' 30 August 2017 https://insidefmcg.com.au/2017/08/30/why-retailers-want-you-to-click-and-collect/

[265] Canstar Blue, 'Online grocery shopping: Coles vs Woolworths' September 2018 https://www.canstarblue.com.au/stores-services/online-grocery/

[266] Australia Post 'Enabling eCommerce in a digital economy,' July 2018 https://auspostenterprise.com.au/content/dam/corp/ent-gov/documents/enabling-ecommerce-in-a-digital-economy.pdf

This insatiable demand for fast delivery at an optimal price point, provides a challenge. How can retailers make their models appealing to consumers without compromising their own margins? Two areas where retailers can focus are through subscription services and automation of the picking and packing process.

I. Subscription Service

Amazon has a strong foothold in this area with their subscription model, Amazon Prime. For an annual fee of, $199 AUD, members receive "Free" two-day shipping as well as extra exclusive benefits from streaming of movies to special product discounts.[267] The Prime service has reached 100 million paid members since its conception and Amazon has shipped more than 5 million parcels through the Prime service.[268] That's 100 million people who have paid an upfront fee and made a committed to the Amazon service. By locking in consumers and offering exclusive benefits, Amazon has a greater chance of retaining their ongoing loyalty and using their membership fee to help offset some of the last mile financial burden.

II. Automation of the Picking and Packing

Smart automated solutions are the way forward.
UK online retailer, Ocado, has taken this approach by developing proprietary technology which includes an automated fulfilment centre comprising of over a thousand robots who spend 15 seconds picking an order (compared to 1 hour and 14 minutes for the manual picking method).[269] The robots can process approximately 65,000 orders every week making the picking and packing process highly efficient.

Subscription services and improving the efficiencies of picking and packing through automation are just two ways retailers can improve profitability.

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[267] 'Amazon Prime membership charge,' https://www.amazon.com
[268] Amazon 'Annual Report' 2017
[269] https://www.retailcustomerexperience.com/articles/how-ocado-masters-e-commerce-grocery-in-the-uk/

Strategies for the future

According to inventor, Alan Kay, "The best way to predict the future is to invent it."[270] Retailers must adopt an innovation mindset if they are to keep up with the competition and demanding consumer expectations. And as the eCommerce world develops, technology will no doubt play an integral role. We can expect to see the wider adoption of automation across all parts of eCommerce delivery including the use of drones and autonomous ground vehicles.[271]

To embrace these developments retailers should focus on leveraging new technology as well as bedding down the core principles as explored in this essay. In summary this involves;

- Developing omnichannel strategies which cover in-home delivery as well as out-of-home delivery with the intent to offer consumers choice, value and convenience.
- Evolving bricks and mortar to delight consumers and drive consumer loyalty
- Creating automated solutions which can be scaled and sustainable over the long term
- Adopting an innovative and nimble mindset to be ready to adapt to rapid technological advancements trying to solve the last mile challenge.

Conclusion

The extent of evolution for the eCommerce world is largely unknown.
However, one area that is certain is the continual desire for the consumer to want more – faster delivery, at a lower cost, with greater flexibility. Returning to Jeff Bezos' earlier quote, "consumers are divinely discontent." Their growing expectations will continue to push retailers to outperform and this as a result will mean for a continuous disruption of the last mile.

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[270] Ted speaker personal profile, Alan Kay, March 2008 https://www.ted.com/speakers/alan_kay
[271] McKinsey & Company, 'Parcel delivery, the future of the last mile' September 2016 https://www.mckinsey.com/~/media/mckinsey/industries/travel%20transport%20and%20logistics/our%20insights/how%20customer%20demands%20are%20reshaping%20last%20mile%20delivery/parcel_delivery_the_future_of_last_mile.ashx