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Fairfax/NZME: competition analysis and quantification

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1. Introduction and executive summary

It is proposed that the New Zealand operations of Fairfax and NZME be merged. We have been asked by Russell McVeagh, counsel to Fairfax and NZME, to:

- Assess the competitive dynamics affecting the New Zealand operations of Fairfax and NZME; and
- Quantify any allocative, productive or dynamic efficiency detriments of a merger, and compare these to the synergy benefits **[ ]**.

Advertisers want to buy exposure to audiences. The internet has opened up a whole new set of platforms on which advertisers can buy that exposure. In order to earn revenue from those advertisers, the online platforms compete with each other, and with offline platforms (including newspapers), to attract those audiences. Platforms such as Google and Facebook, with their rich sources of audience data and ability to tailor advertising to specific audiences, are particularly strong competitors.

News media organisations, with their large fixed cost bases, are finding it more difficult to attract the required advertising revenue to remain viable, and many newspapers globally have been shut down. The (publishing) advertising revenue of **[ ]**, and EBITDA **[ ]**, for the past five financial years. **[ ]** and the **[ ]**.

It is difficult to apply traditional market definition tools to the media, because:

- The platforms are two-sided; and
- Prices on the reader side are often zero.

Nevertheless, the evidence we have reviewed implies that:

- Physical newspapers, news websites, and other online platforms (e.g., Facebook and Google) compete for advertisers and audiences; and
- The barriers to publishing and distributing journalism have been dramatically reduced by the internet.

Accordingly, even without considering the constraints that other offline platforms such as television might provide, it seems likely that the merged entity would continue to be subject to significant competitive pressure. This would include pressure to maintain quality:

- The merged entity would need to offer readers the content they value, in order to attract audiences and therefore advertisers;

- The merged entity would be subject to pressure to maintain journalistic quality (e.g., accuracy, objectivity, analysis and investigation) because the internet has dramatically lowered barriers to publishing and distributing journalism;[1] and
- These same low barriers, and open access, mean that readers would be able to access diversity and plurality of journalism.

In fact, it is the view of Fairfax and NZME that the merger would result in quality benefits, for two broad reasons:

- The resulting business would be more financially sound and able to invest in quality; and
- The merged entity would be able to reposition the Stuff and nzherald.co.nz websites so as to offer greater variety and therefore a broader audience.

For the reasons we explain in this report, we agree these would be public benefits.

Nevertheless, in case the Commission comes to the view that it is not sufficiently satisfied it can clear the transaction due to competitive effects on one or both of the advertiser or reader sides, we have been asked to comment on the benefits and detriments of the transaction, including to quantify the potential allocative, productive and dynamic efficiency detriments.

We note for a start that quantifying any quality effects due to reduced competitive pressure would be very difficult. While we could develop methodological approaches (e.g., reduced quality could be conceptualised as reduced willingness to pay, and therefore a downwards shift of the demand curve), there is little if any guidance as to the magnitude of such an effect.[2]

Therefore we limit our quantification to the impact of potential price effects on allocative efficiency, as well as productive and dynamic efficiency detriments.

To be conservative, we have quantified allocative efficiency detriments in the relevant areas of overlap assuming merger-induced price increases of **[ ]**, based on merger simulation. We emphasise though that we believe this price increase range is an overestimate. In particular, we do not think the merger simulation models really capture the competitive pressure imposed by firms such as Google and Facebook. Despite not being that old, these firms continue to gain share[3] from longer standing platforms, and have significant audience and data advantages. Further, even if other offline platforms such as television are not technically in the same antitrust market, there is likely to be some constraint from these platforms.

When combined with productive and dynamic efficiency detriments, this results in estimated efficiency detriments ranging from **[ ]** per annum. In Table 1 below we have balanced these

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1 There would be pressures other than competition as well, such as a journalist's pride in her work, the relevant code of ethics and the Press Council, and the threat of a defamation suit.

2 Moreover, such effects can be difficult to quantify when the current price faced by readers is zero.

3 The share data we have is for revenue, but we presume the same pattern is occurring with volume share.

detriments against the benefits and one-off costs **[ ]**, comparing the minimum benefits with maximum detriments and vice versa (using a 10% discount rate to calculate the five-year net present value, NPV). It can be seen that even adopting what we consider to be overly cautious price increase assumptions, the quantified detriments are much lower than the benefits.

Table 1[4]
Balancing of benefits and detriments

	Minimum benefit and maximum detriment		Maximum benefit and minimum detriment	
	Annual results	5-year NPV	Annual results	5-year NPV
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]

2. Post-merger constraints on pricing/quality

2.1. Introduction

In this section, we outline the constraints and pressures that would continue to operate on the merged entity. This helps to inform the parameters for the detriments quantification (e.g., price increases, demand elasticity), which we undertake in section 3 and Appendix B of this report.

2.2. Two-sided platforms

Newspapers and news websites are two-sided. A two-sided market is characterised by an intermediary or platform (in this case, the publisher) serving two different groups of consumers (readers and advertisers). Moreover, there is a cross-platform externality between the demands of the two groups: the demand by readers for newspapers or online news is, in part, related to the amount of advertising shown; while demand for advertising in newspapers or online is a function of the number of readers that will ultimately view the advertisement.

Accordingly, if a newspaper or news website raises price on the reader side, it would lose not just some readers, but also some advertising revenue, due to the cross-platform externality. Therefore merger-induced price increases on the reader side in particular will be more subdued than in a "one-sided" market, all else being equal.

[4] **[ ]**

Likewise, a reduction in quality on the reader side would also negatively affect advertising demand. Therefore the pressure on a newspaper or news website to provide quality content does not just come from other newspapers or news websites, but also from a broader competition to obtain the attention of consumers of news/information.

2.3. Online competition

2.3.1. Introduction

The key competition questions are:[5]

1. For advertisers:
   A. Is a news website in the same market as a physical newspaper?
   B. Are other online platforms/websites (e.g., Facebook, TradeMe) in the same market as news websites?
2. For readers:
   A. Is a news website in the same market as a physical newspaper?
   B. Are other online platforms/websites (e.g., Facebook, YouTube) in the same market as news websites?

It could also be that other, offline platforms are economic substitutes on both sides of the market. However, for the reasons we explain in this report, we do not think it is necessary to test this, because even if the market excludes these platforms, it seems likely that the merged entity would continue to be subject to significant competitive pressure.

2.3.2. Advertiser side

The evidence is that newspaper advertising quantity and prices have been falling in New Zealand, as they have been globally.[6] Figure 1 show advertising quantities for each of various Fairfax papers from 2012-2015, while Figure 2 shows the (volume-weighted) average advertising price for the same period across all of these same papers. Figure 3 and Figure 4 show the same data (over a slightly longer time period, from 2011-2015) for NZME's *New Zealand Herald* and *Herald on Sunday*.

[ ]. This might reflect the slightly different position in product space of community papers (e.g., zero price, local content).

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[5] We use the term "market" as it is used in section 3(1A) of the Commerce Act, i.e., "a market in New Zealand for goods or services as well as other goods or services that, as a matter of fact and commercial common sense, are substitutable for them".

[6] See, e.g., Shrihari Sridhar and S. Sriram (2015), "Is Online Newspaper Advertising Cannibalizing Print Advertising?", Working paper, July.

Figure 1
[ ]

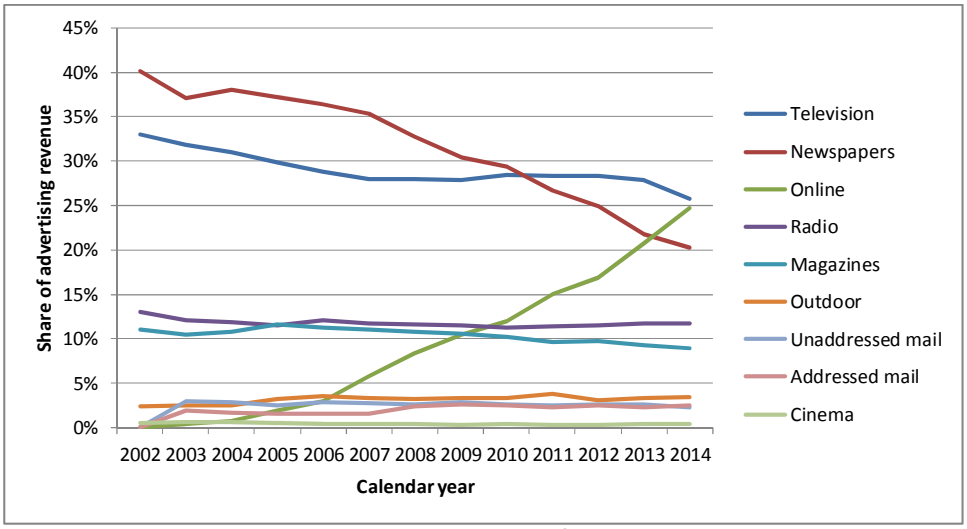
Figure 2
[ ]

Figure 3
[ ]

Figure 4
[ ]

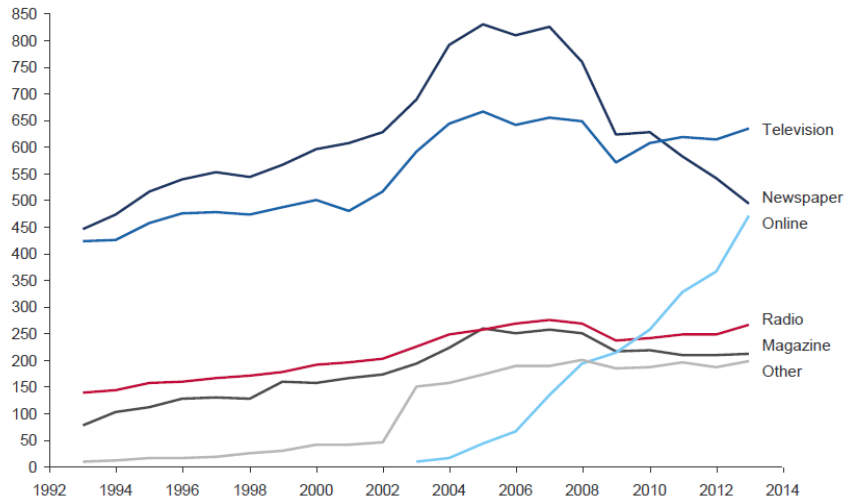
The decline in newspaper advertising share is a reflection of the incline in online advertising share. Advertising Standards Authority (ASA) data showing advertising expenditures across the different media from 2002-2014 illustrates that while newspaper advertising share has been falling, online advertising share has been increasing – see Figure 5, and Figure 6 for a longer time-series with actual dollar expenditures (rather than shares). As we discuss later in this section, the newspaper publishers are only recovering a fraction of the lost print advertising through their websites.

Figure 5
Share of advertising expenditures across different media, 2002-2014



Source: NERA analysis of ASA data

Figure 6
Advertising expenditures ($) across different media, 1992-2014



Source: ASA data (sourced from **[ ]**)

This data suggests there is substitution between advertising in newspapers and advertising online, and the economics literature also finds this. For example, Ratliff and Rubinfeld (2010) point to the substantial shift away from newspaper advertising towards online advertising,[7] and suggest that, of all the offline advertising media, newspaper advertising may be the closest substitute for online advertising. Ratliff and Rubinfeld (2010) suggest that the constraint between online and newspaper advertising may place them in the same relevant antitrust market. See also Goldfarb and Tucker (2011).[8]

One possibility is that newspaper ads are largely switching to news websites, the leading two of which belong to Fairfax and NZME and would be merged under the proposed transaction. However, it seems more likely that the internet has opened up a whole new channel for advertisers. The evidence is that:

- The most accessed websites in New Zealand include those belonging to Google, Facebook and YouTube – see Figure 7, showing the monthly New Zealand unique audience for the top 10 websites for January 2015 to January 2016; and

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7 James D. Ratliff and Daniel L. Rubinfeld (2010), "Online Advertising: Defining Relevant Markets", *Journal of Competition Law and Economics*, 6(3), 653-686. See also David S. Evans (2009), "The Online Advertising Industry: Economics, Evolution and Privacy", *Journal of Economic Perspectives*, 23(3), 37-60.

8 Avi Goldfarb and Catherine Tucker (2011), "Substitution between offline and online advertising markets", *Journal of Competition Law and Economics*, 7(1), 37-44.

Figure 7
[ ]

- Google and Facebook in particular have the largest shares of online agency advertising spending in New Zealand – see Figure 8, showing that Google and Facebook have **[ ]** respectively of online agency advertising spending by the top online media advertisers in New Zealand, disproportionately large compared to their shares of audience.[9] This analysis is based on Standard Media Index (SMI) data, which records (New Zealand) advertising revenue earned by a number of large media firms.[10] The data only reflects revenue earned through agency advertising, so excludes any advertising revenue earned directly by media firms. Fairfax's view is that **[ ]**.

Figure 8
[ ]

In addition, internal Fairfax evidence refers to these same companies as being competitors in respect of advertising. For example, **[ ]**.[11]

Also, Sridhar and Sriram (2015, 23) state that:[12]

> *Our first finding is that 7-17% of the loss in print advertising can be traced back to cannibalization due to growing online newspaper advertising. Therefore, we argue that cannibalization should be a consideration in the marketing decisions of the paper. Our finding of a negative tradeoff between online and print advertising within the newspaper, notwithstanding this untapped positive correlation, is likely to be strong and credible indicator of a substituting relationship.*
>
> *Second, a significant fraction of the decline of print newspaper advertising revenue co-occurs with decline in online newspaper advertising revenue, suggesting that advertisers are substituting away to media options outside the newspaper. This result implies that newspapers ought to work to arrest this trend of print advertising losing to emerging online media options such as search advertising.*

Note that, from Figure 6, newspaper advertising expenditures have dropped by approximately $350m from 2005 to 2014, but the combined advertising revenues of stuff.co.nz and nzherald.co.nz is, in 2015, $**[ ]**. This suggests that a significant portion of the drop in newspaper advertising is substituting to something other than the stuff.co.nz and nzherald.co.nz websites.

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9 Based on the data in Figure 7, Google's share of the unique audience in January 2016, across the top 10 websites shown, is **[ ]**%, while Facebook's is **[ ]**%.

10 The SMI data records agency advertising spending for 11 media firms. In contrast the Nielsen online ratings unique audience data has the "top 10" websites by New Zealand unique audience number.

11 **[ ]**.

12 Shrihari Sridhar and S. Sriram (2015), "Is Online Newspaper Advertising Cannibalizing Print Advertising?", Working paper, July.

As well as having the most accessed websites, a key advantage that Google and Facebook have in competing for advertisers is data about their audiences. This enables these firms to market their ability to better target advertising spend. As noted in a recent feature on Facebook in *The Economist*:[13]

> *At Facebook [Sheryl Sandberg, the chief operating officer] has plenty to play with. The mass of data it has on users is attractive to advertisers, who can target messages to their desired audiences with greater precision than they can through traditional media, such as television.*

This competitive advantage for Google and Facebook is demonstrated in the growth in their share of advertising revenue. Figure 9 shows the share of (New Zealand) digital and newspaper agency advertising revenue for a number of firms, based on SMI data. From October 2013 to July 2015, Google and Facebook have both grown their share, largely at the expense of agency advertising revenue through Fairfax and NZME's newspapers.

Figure 9
[ ]

Prior to the internet, physical newspapers were attractive to advertisers for two primary reasons. Firstly, keeping up with the daily news is a popular activity and newspapers therefore attracted large, engaged audiences compared to other media formats.

The second reason, importantly, was that newspaper audiences were a rare point of access for advertisers in the daily activity of a target customer. Outside of time spent with television/radio/magazines, most of the time that people spent not reading newspapers was not accessible to advertisers. However, this has fundamentally changed with the advent of the internet.

The internet has transformed how people spend their time and pursue their interests, with a Q4 2015 Nielsen analysis showing New Zealanders spend an average 15 hours per week online.[14] Most of this time is spent on websites, platforms and apps that are accessible to advertisers.

This has enabled products such as Google's AdSense, which allows ad revenue to be earned on websites that would otherwise not have the scale or capability to sell ad space directly to advertisers. In effect, with AdSense every website, no matter how small or niche, became a substitute for, and a competitor to, newspapers. It is similar with social media, where a large proportion of online time is spent, with all the major sites (Facebook, Twitter, Pinterest, etc) now selling advertising.

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13 9 April 2016.

14 Nielsen, "New Zealand Multi-Screen Report Year Ending Q4 2015".

2.3.3. Reader side

2.3.3.1. Newspapers and news websites

It is probably reasonable to assume that the demand for news content/information (irrespective of the platform) is stable or growing. Against this context, the evidence is that the number of physical newspapers being purchased is steadily declining[15] - see, for example, Figure 10 showing annual circulation for Fairfax's metro dailies and Sunday papers from 2013-2015, and Figure 11 showing the equivalent figures for NZME's *New Zealand Herald* and *Herald on Sunday*.[16]

In addition, a similar point to that noted above applies regarding the Fairfax community newspapers. The internal Fairfax documents state **[ ]**.[17]

Figure 10
[ ]

Figure 11
[ ]

At the same time, news websites are being increasingly accessed, as shown in Figure 12.

Figure 12
[ ]

This strongly suggests that newspapers are subject to competitive pressure from news websites on the reader side. While there is little in the economics literature addressing the question of precise market definition on the reader side, a substitutability relationship between newspapers and news websites is supported.[18]

Having said that, we do note that despite falling demand by readers for newspapers, cover prices to readers have been rising marginally in real terms – see Figure 13.[19, 20] **[ ]**. This may reflect

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15 The same relationship holds for the number of newspapers being read. See Nielsen data on recent newspaper readership trends: See http://www.nielsen.com/content/dam/nielsenglobal/nz/docs/newspaperandmagazinecomparatives/newspaper-toplines-q2-2014-q1-2015.pdf

16 This is a global phenomenon – see, e.g., http://www.pewresearch.org/fact-tank/2015/05/22/the-declining-value-of-u-s-newspapers/.

17 **[ ]**

18 See, e.g., Matthew Gentskow (2007), "Valuing New Goods in a Model with Complementarity: Online Newspapers", *American Economic Review*, 97(3), 713-744 and Adithya Pattabhiramaiah, S. Sriram and S. Sridhar (2014), "Rising Prices under Declining Preferences: The case of the U.S. Print Newspaper Industry", Working paper.

19 We analyse cover prices, rather than subscription prices, because the latter are influenced by changes in the subscriber mix. For example, if one newspaper has a larger proportion of customers that remain on legacy subscriber discounts, this may influence the rate of subscriber price change in comparison to other newspapers.

some degree of competition between the Sunday papers, and we return to this issue later in our report.

Figure 13
[ ]

The same phenomenon is occurring even more dramatically in the US, where subscription prices reportedly rose by 40-60% between 2006 and 2011.[21] Pattabhiramaiah, Sriram and Sridhar (2014) offer the following explanation(s):

> *Our results suggest that decline in advertising subsidy was a big reason for why readers are increasingly facing higher subscription prices today. We also find evidence that the newspaper firm adopted a price-based segmentation strategy focused on charging higher prices in order to serve only the loyal readers of its most popular bundle, possibly in an attempt at coping with the large revenue decline it has witnessed over the last five years. This indicates that newspapers maybe becoming a more niche product serving a smaller readership base. Further, this result is also suggestive of a change in the mainstream information dissemination role played by newspapers in the society [reference omitted]. Finally, a shift in newspapers' traditionally advertising-supported revenue structures towards a more "balanced" subscription-advertiser-funded model appears to be an appropriate strategy especially given the nature of decline in newspaper advertising.*

We note there appears to be a limit to this rebalancing, illustrated by the large number of newspapers that have been shut down globally.[22]

We note also that the direction of switching suggests the competitive pressure for readers between newspapers and news websites may be asymmetric – news websites may constrain newspapers more than the other way around.

2.3.3.2. News websites and other online platforms

2.3.3.2.1. Introduction

The next question is whether other online platforms (e.g., Facebook) are economic substitutes for news websites, or applying the Commission's formal framework, whether a hypothetical sole supplier of news websites could profitably increase prices (or reduce quality) by at least a small, but significant, amount.

While much has been written about the impact of the internet on news publishing, there is little if any empirical evidence on substitutability between news websites and other online platforms in response to relative price or quality changes, at least in an antitrust sense. This is possibly due to

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[20] Of course, what matters from a competition perspective is whether factual prices would be higher than counterfactual prices, regardless of whether counterfactual prices are trending up or down.

[21] Pattabhiramaiah, Sriram and Sridhar (2014, 1), *op cit*.

[22] See, e.g., http://newspaperdeathwatch.com/.

the difficulty of applying the SSNIP test to a product with a zero price,[23] and to the difficulty of defining and measuring quality.

Nevertheless, the evidence implies that:

- News websites compete with other online platforms for eyeballs and "dwell time", and indeed other online platforms such as Facebook often distribute news content generated by news platforms, effectively bypassing the websites of those platforms; and
- While Stuff and nzherald.co.nz are close in product space as broad and in-depth creators of news content, the internet has dramatically reduced the barriers to publication and distribution of news content.

Accordingly, even without considering the constraints that other offline platforms such as television might provide, it seems likely that the merged entity would continue to be subject to significant competitive pressure.

2.3.3.2.2. Online competition for eyeballs

Internal evidence from both the parties supports a view that they are concerned with attracting audience attention, and consider platforms such as Google and Facebook as rivals for that attention. In particular:

- A Fairfax internal presentation refers to **[ ]**;[24]
- Another Fairfax internal presentation refers to Stuff as **[ ]**;[25] and
- An NZME internal presentation **[ ]**.[26]

[ ].

The internal evidence of the parties also shows that they carefully analyse data on what viewers are reading online. For example, Figure 7 earlier in our report is sourced from Fairfax, and analyses Stuff in respect of website audiences, including against Google and Facebook. Similarly internal analysis by NZME considers its share of the New Zealand and Auckland digital audience based on Nielsen data, comparing against websites such as Facebook, YouTube, Yahoo and MSN.[27]

Mobile access to the internet has been a real enabler of competition for attention, as a person with some time has many options at her fingertips, e.g., waiting for a coffee, a person could

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23 See David S. Evans (2011), "The Antitrust Economics of Free", *Competition Policy International*, Spring.

24 **[ ]**

25 **[ ]**

26 **[ ]**

27 Nielsen data – advertisers and audience.xlsx spreadsheet provided by NZME.

check the news or what her friends are up to. The evidence suggests that readers are increasingly using mobile phones to access the internet. For example:

- Average monthly unique browsers of the nzherald.co.nz mobile site increased by **[ ]** from 2014 to 2015, compared with **[ ]** for the increase in average monthly unique browsers for the nzherald.co.nz desktop site. In addition, in the first three months of 2016, average monthly unique browsers to the nzherald.co.nz mobile site **[ ]** those for the desktop site (an average of **[ ]** for the mobile site compared with **[ ]** for the desktop site); and
- For stuff.co.nz, we have data on average *daily* unique browsers across the various platforms. This data shows that average daily unique browsers for the mobile stuff.co.nz site increased by **[ ]** from 2014 to 2015, compared with a **[ ]** increase for the desktop site.

The evidence we discussed in section 2.3.2 above demonstrates that online platforms such as Facebook and Google are competing against the news websites for advertising, and a key enabler of this is their relatively large audiences. Accordingly the news websites need to attempt to win those audiences. They do this by offering a differentiated product (i.e., news rather than, for example, a search engine or updates on friends), but they are nevertheless competing for audience time. Indeed, as we discuss below, other online platforms such as Facebook often distribute news content generated by news platforms, effectively bypassing the websites of those platforms.

2.3.3.2.3. Impact of internet on news contestability

The internet has disrupted media markets in a number of key ways:

- Publication and distribution barriers have been lowered: Setting up a webpage fills the dual purpose of publishing and distributing. The costs of setting up a website are low in both a financial and transaction cost sense. Existing platforms such as Wordpress and more complex content management systems can set up websites "off the shelf", making transaction costs relatively low. In the case of Wordpress.com, a basic website can be set up for free. Wordpress in particular has achieved relatively widespread adoption, claiming to "Power 25% of the internet" and counting TechCrunch, CNN and Time among its users.[28] Locally, we understand the new entrant thespinoff.co.nz, as well the website of Metro,[29] operate on the Wordpress platform. Furthermore, cloud computing allows publishers to variabilise the costs of hosting a website, making the upfront costs relatively low and allowing firms to scale efficiently as traffic grows;[30]
- Convergence across media types: Previously a physical newspaper could not have audio or video content. Now all media firms have a website, so a traditional newspaper can upload

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[28] https://wordpress.com/, accessed 3/05/2016

[29] www.metromag.co.nz

[30] See for example, local hosts such as www.websdrive.co.nz and international cloud computing services such as Amazon Web Services (http://aws.amazon.com/websites/).

video content, radio and television stations can publish written content, etc. A prime example of this in New Zealand is Mediaworks merging its radio and television news units into the integrated provider "Newshub", complete with a news website.[31] More generally, radio/TV stations are posting opinion pieces and written versions of stories on their websites;[32]

- Where and how consumers access content is changing/has changed: Consumers are increasingly accessing content/news on mobile devices[33] and during work hours.[34] The intermittent nature of accessing news on the go and while at work might explain why consumers are increasingly accessing articles directly rather than browsing a homepage directly,[35] and has implications for dwell time; [36] and
- Online distribution is being disrupted by social media, and social media is open access:[37] Consumers allow news to "find them" via social media channels rather than browsing a news website. In effect, social media provides a curation/filtering service that consumers value. Importantly, social media is open access, allowing any publisher to have great reach for their content.

The last two points are perhaps key in the present context. Distribution is really "content discovery" from a consumer's perspective, and this can occur either via visiting the homepage, which aggregates lots of stories, or via social media when someone shares an article. This implies that the homepages of, for example, stuff.co.nz and Facebook are competing distribution channels.

The recent history of the *New York Times* provides a compelling example of the accelerated impact social media has had. As shown in the graph below, between 2011 and 2013, visits to the *New York Times* home page halved, and instead readers have been referred to the *New York Times* by social media, search results, links to stories in emails or referrals from other sites.

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31 http://www.newshub.co.nz/

32 See, e.g. the news section of the NewstalkZB (http://www.newstalkzb.co.nz/news/) and the Newshub section on the Radiolive website (http://www.radiolive.co.nz/Newshub.aspx), where Newshub stories are cross-posted.

33 For example, we understand that **[ ]**.

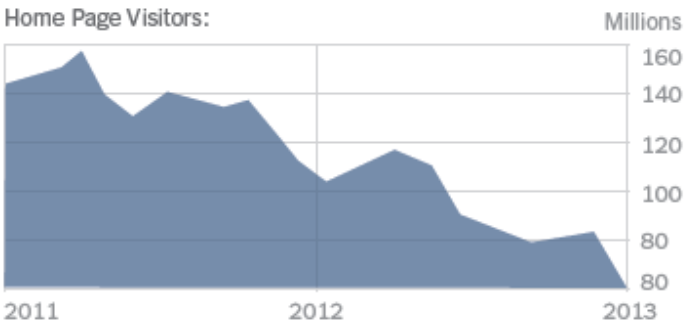
34 See, e.g. the figure on page 59 of the Reuters *Digital News Report 2015*. This shows that "Mainly Digital" consumers of news have a much flatter profile of news consumption throughout the day, whereas "Traditionalists" exhibit distinct peaks in news consumption first thing in the morning and early evening.

35 The increasing importance of referrals, which by definition are generally direct links to articles, is discussed below.

36 As Hal Varian, Chief Economist at Google notes: *"…a disproportionate amount of online news reading occurs during working hours. The good news is that newspapers can now reach readers at work, which was difficult prior to the internet. The bad news is that readers don't have a lot of time to devote to news when they are supposed to be working."* See http://googlepublicpolicy.blogspot.com.au/2010/03/newspaper-economics-online-and-offline.html.

37 The increasing importance of social media to **[ ]** is discussed below.

Figure 14
New York Times: Home Page visitors



Source: New York Times (2014), *Innovation*.

A similar picture is present in New Zealand, with **[ ]**, as demonstrated by Figure 15 below.

Figure 15
[ ]

We understand the Fairfax data classifies only Facebook and Twitter as "social". Therefore, "Other Web Sites" will pick up other social networks (e.g. LinkedIN) as well as referral traffic from other websites/apps. Digging into social traffic reveals [ ].

Figure 16 below demonstrates that between March 2015 and March 2016:

- Social page views have **[ ]** by **[ ]**, from **[ ]** to **[ ]**; and
- Social unique visitors have **[ ]** by **[ ]**, from just under **[ ]** to **[ ]**.

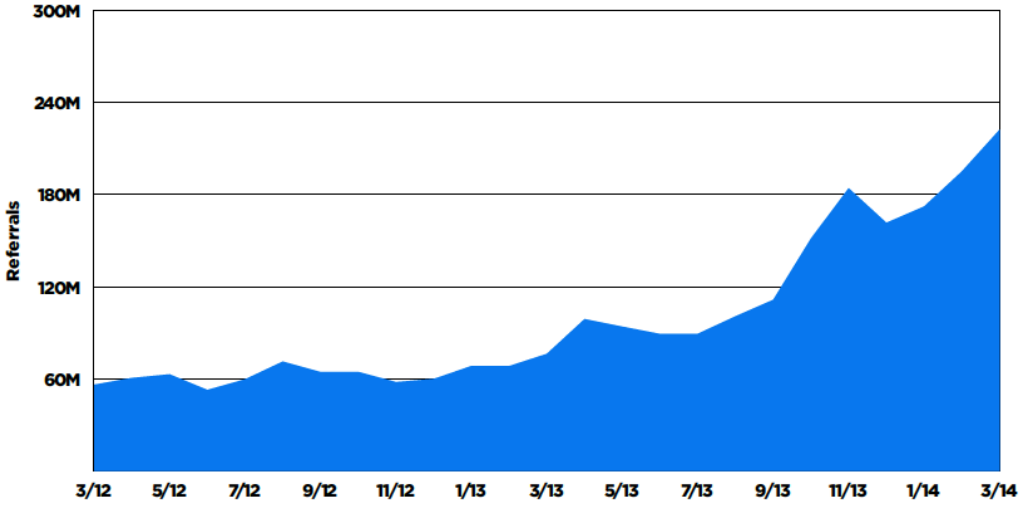
Figure 16
[ ]

Interestingly, the majority of this **[ ]** has occurred in the 4 months since December 2015.

This pattern is also evident overseas, where referrals from social media have become an increasingly important source of traffic. For example:

- Analytics firm Parse.ly, which provides web analytics to media companies,[38] reported that in the period May to July 2015, 43% of referrals to its clients came from social media, with Facebook surpassing referrals from Google;
- BuzzFeed states that 75% of its traffic comes from social media referrals;[39]
- An article in *The Atlantic* reported the accelerated trend in referrals in the wake of The New York Times *Innovation* report, noting that referrals from Facebook to the "BuzzFeed network" (which included[40] sites such as BuzzFeed, Huffington Post, the *Times*, *New York* magazine, and *The Atlantic*) reached record levels two months in a row at the beginning of 2014, having more than tripled since 2012. This is shown in Figure 17 below; and

Figure 17
Facebook referrals to the BuzzFeed network



Source: http://www.theatlantic.com/business/archive/2014/05/what-the-death-the-homepage-means-for-news/370997/

- Pew Research Center analysis of the 26 most popular news websites in the United States shows that referral visitors spend much less time on the news sites then direct visitors do, as shown in Figure 18 below.

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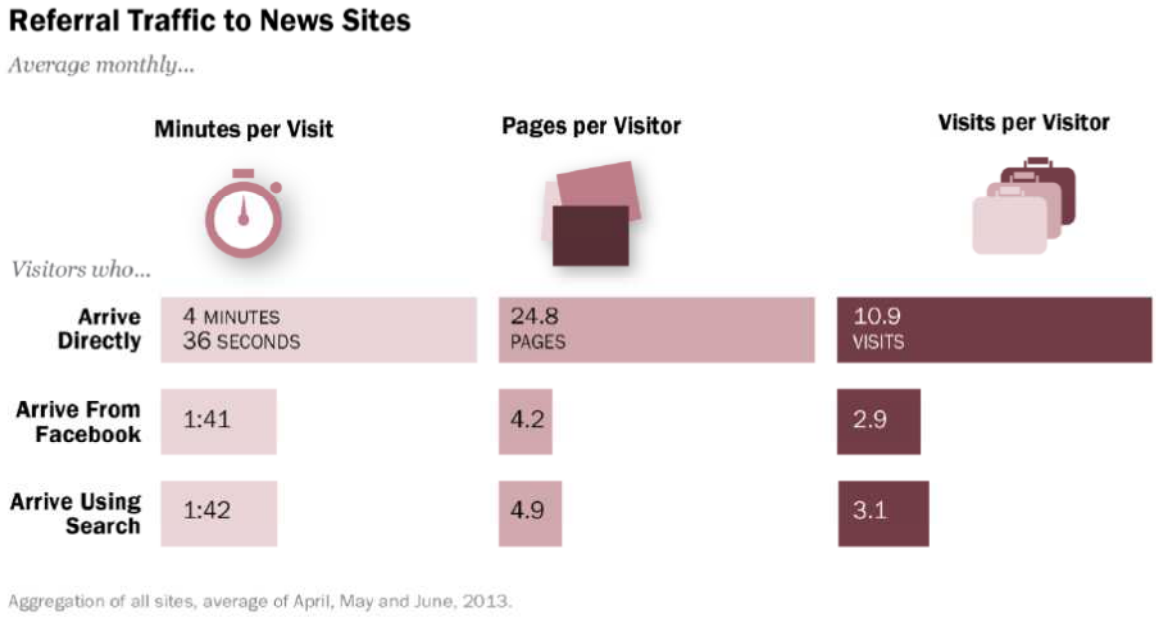
38 Which include "more than 400 major news and media outlets, including traditional publishers such as Wired, The Atlantic, Reuters and The Daily Telegraph, as well as a large group of digital-only outlets such as Mashable, The Next Web, and Business Insider." See http://fortune.com/2015/08/18/facebook-google/.

39 http://www.buzzfeed.com/advertise, Accessed 2/5/2106.

40 We understand that the BuzzFeed traffic partner network no longer operates, see http://qz.com/213212/buzzfeed-is-shutting-down-its-traffic-partner-network-ahead-of-a-video-push/

Figure 18
Referral traffic to 26 most popular US news sites



Source: Pew Research Center (2014), *Social, Search & Direct: Pathways to Digital News*

The diminishing importance of the homepage as a distribution channel and the open access nature of social media mean that content publishers can be displaced by other publishers who better serve consumer demands. Relevant in this regard is that online only publishers such as the Huffington Post and BuzzFeed now have more traffic than the *New York Times*.[41] The *New York Times* even notes that the Huffington Post often generates (through repackaging and better distribution) more *New York Times* journalism traffic than the *New York Times* itself does.[42]

More generally, the internet has brought topic specific publications online, which in some sense has the effect of "unbundling" the news. Local examples include:

- The NBR and interest.co.nz, which focus on business news;
- Hive News, a subscription news service focusing on "government and business from around the beehive";[43]
- The Spinoff.co.nz, which covers sport, pop culture, politic, media and society;

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41 Page 5, New York Times (2014), *Innovation*.

42 Page 3, New York Times (2014), *Innovation*

43 http://www.hivenews.co.nz/about

- Stoppress.co.nz, which focuses on news for "marketing, media and advertising executives"; and
- The techday.com network, which specialises in technology news.[44]

Furthermore, the ease with which blogs can be set up has led to a proliferation of them, such as:

- Political blogs, e.g. TheStandard.co.nz and Kiwiblog.co.nz;
- Sciblogs.co.nz, which syndicates posts from scientific blogs in New Zealand; and
- TransportBlog.co.nz, which focuses on transport issues in Auckland.

Topic specific publications can be published as standalone content on social media platforms (i.e., they can compete through the quality of specific content without the need to have their own popular platform/homepage).

The preceding discussion is very relevant when considering the implications of the merger of Fairfax and NZME for quality:

- The merged entity would need to offer readers the content they value, in order to attract audiences and therefore advertisers;
- The merged entity would be subject to pressure to maintain journalistic quality (e.g., accuracy, objectivity, analysis, investigation) because the internet has dramatically lowered barriers to publishing and distributing journalism;[45] and
- These same low barriers, and open access, mean that readers would be able to access diversity and plurality of journalism.

2.3.4. Conclusions

It is difficult to apply traditional market definition tools to the media, because:

- The platforms are two-sided; and
- Prices on the reader side are often zero.

Nevertheless, the evidence we have reviewed implies that:

- Physical newspapers, news websites, and other online platforms (e.g., Facebook and Google) compete for advertisers and audiences; and
- The barriers to publishing and distributing journalism have been dramatically reduced by the internet.

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[44] https://techday.com/about-us/

[45] There would be pressures other than competition as well, such as a journalist's pride in her work, the relevant code of ethics and the Press Council, and the threat of a defamation suit.

Accordingly, even without considering the constraints that other offline platforms such as television might provide, it seems likely that the merged entity would continue to be subject to significant competitive pressure.

2.4. Sensitivity to volume losses

The data from both Fairfax and NZME indicate that most relevant platforms are largely fixed cost businesses – variable costs are generally small. The main exception is the reader side of the newspapers, where there are variable costs associated with printing (newsprint, ink, etc), although gross margins are still relatively high, at approximately **[ ]**, suggesting material fixed costs.

Accordingly the merged entity would be very sensitive to volume loss, and this would also mitigate post-merger price increases.

3. Quantifying detriments

3.1. Price increases and quality effects

It is standard economic theory that a merger of two firms close in product space would result in unilateral effects, whether that be a price increase or a quality decrease (or both). However, for the reasons discussed in section 2 of this report, we do not expect any material unilateral effects from the merger of Fairfax and NZME. Indeed, it is the view of Fairfax and NZME that the merger would result in quality benefits, for two broad reasons:

- The resulting business would be more financially sound and able to invest in quality; and
- The merged entity would be able to reposition the Stuff and nzherald.co.nz websites so as to offer greater variety and therefore a broader audience.

This latter point can be conceptualised in a Hotelling-type framework with no price competition (on the reader side).[46] The websites under independent ownership may locate close to each other in order to maximise share of audience – a shift away in product space by, say, Stuff might result in a sufficient number of readers switching to nzherald.co.nz to make the shift unprofitable. However, that effect would be internalised under merged ownership, allowing the websites to be separated in product space. (Of course, for the reasons we have described in this report, the merged entity and its platforms would continue to face competition from other firms.)

In case the Commission comes to the view that it is not sufficiently satisfied it can clear the transaction due to competitive effects on one or both of the advertiser or reader sides, so must consider the weighting of public benefits and detriments, we have been asked to comment on the benefits and detriments of the transaction, including to quantify the potential allocative, productive and dynamic efficiency detriments.

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[46] Hotelling, H (1929) "Stability in Competition." Economic Journal, Vol. 39, pp. 41–57.

The evidence and characteristics discussed in section 2 above suggest that any merger-induced price increases (or quality decreases) would be relatively low. We note too that quantifying quality effects on the reader side is very difficult. While we can develop methodological approaches (e.g., reduced quality could be conceptualised as reduced willingness to pay, and therefore a downwards shift of the demand curve), there is little if any guidance as to the magnitude of such an effect in the present circumstances and no competition authority we are aware of in any other jurisdiction has attempted to quantify those effects.

One possibility is to treat a quality decrease due to reduced competition as being equivalent in its welfare implications to a price increase.[47] However, we are not aware of any evidence that would help determine the appropriate magnitude of the price increase to apply.

Moreover, the dimensions of quality can be wide ranging, particularly in regards to news content, and this can make assessing quality changes difficult and subjective. For these reasons we have not attempted to quantify the quality detriments of the proposed Fairfax/NZME merger.

Regarding the detriments arising from price increases, there is virtually no empirical evidence we are aware of to provide guidance on possible price increases. While we are hesitant to use it in the present case, one approach is to undertake merger simulation modelling to simulate the price effects. Typically merger simulation modelling is applied in one-sided markets, although there have been some attempts in the academic literature to develop two-sided merger simulation models.[48] However, such two-sided modelling requires econometric estimation of a large number of elasticity parameters. In the present case, we do not believe that the data is sufficiently robust to allow such econometric estimation. In particular, robust econometric estimation of elasticities typically requires, among other data, a long time series of observations of price and quantity, particularly where prices and quantities change frequently. It has been suggested that a minimum of 50 observations is required to produce meaningful results, but a longer time series is recommended.[49] In the present case we only have annual data for a relatively short time series. Moreover, for some of the market segments that we consider (e.g., websites and community newspapers) there is no price on the reader side, which complicates elasticity estimation.

Evans and Noel (2008) point out that one-sided merger simulation models are wrongly specified if they are applied to two-sided markets without taking into account the cross-platform

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[47] Note that in its *Mergers and Acquisitions Guidelines*, the Commission states (paragraph X6, footnotes omitted), "A lessening of competition is generally the same as an increase in market power – the ability to raise price above the price that would exist in a competitive market (the 'competitive price'), or reduce non-price factors such as quality or service below competitive levels."

[48] See Lapo Filistrucchi, Tobias J. Klein and Thomas O. Michielsen (2012), "Assessing Unilateral Merger Effects in a Two-Sided Market: An Application to the Dutch Daily Newspaper Market", *Journal of Competition Law and Economics*, 8(2), 297-329.

[49] LECG (1999), "Quantitative Techniques in Competition Analysis", Prepared for the Office of Fair Trading, October, paragraph 9.7.

externalities between the two sides.[50] For this reason we consider that it would not be appropriate to apply a one-sided merger simulation model to the reader side in particular, where this cross-platform externality is relatively strong, i.e., the demand for advertising is strongly affected by the number of readers.

However, the effect of advertising on reader demand may not be as strong. Indeed, the empirical economics literature is not definitive in respect of the relationship between advertisements and demand by readers. While there are some cases where a strong relationship is found, there is also evidence that this relationship is either weak or non-existent.[51]

Accordingly, we have applied both Bertrand and Cournot merger simulation models to the advertising side of the market only. We choose these models because they are tractable, but we do emphasise again that both have significant limitations in the present situation:

- As already noted, both were designed to apply to one-sided markets;
- A significant proportion of ad inventory is sold by auction (e.g., via KPEX or Google Adwords), and neither the Bertrand nor the Cournot models are auction models;
- We do not think these models really capture the competitive pressure imposed by firms such as Google and Facebook. Despite not being that old, these firms continue to gain share from longer standing platforms, and have significant audience and data advantages; and
- Even if other offline platforms such as television are not technically in the same antitrust market, there is likely to be some constraint from them.

Accordingly, we believe these models will overstate merger-induced price increases.

A Bertrand model is typically used in differentiated products markets, but we are advised by both NZME and Fairfax that there is relatively limited differentiation from an advertiser's perspective regarding online advertising.

In addition, we understand that sellers of online advertising typically have a fixed "inventory" of available advertising capacity, and prices move in order to sell this inventory.[52] In markets

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50 David S. Evans and Michael D. Noel (2008), "The Analysis of Mergers That Involve Multisided Platform Businesses", *Journal of Competition Law and Economics*, 4(3), 663-695.

51 For example, Fan's empirical results support her assumption that newspaper readers do not care about advertising (Ying Fan (2013), ""Ownership Consolidation and Product Characteristics: A Study of the US Daily Newspaper Market", *American Economic Review*, 103(5), 1598-1628). Filistrucchi et al (2012) find that readers do slightly prefer advertising, although the effect is "not very pronounced" (Lapo Filistrucchi, Tobias J. Klein and Thomas O. Michielsen (2012), "Assessing Unilateral Merger Effects in a Two-Sided Market: An Application to the Dutch Daily Newspaper Market", *Journal of Competition Law and Economics*, 8(2), 297-329). In contrast, Kaiser and Song (2009) find that advertising does increase the demand by readers, at least in respect of magazines on which their analysis focuses (Ulrich Kaiser and Minjae Song (2009), "Do Media Consumers Really Dislike Advertising? An Empirical Assessment of the Role of Advertising in Print Media Markets", *International Journal of Industrial Organisation*, 27(2), 292-301.

52 Although the inventory is only fixed in the very short-term. For example, we understand that an occurrence that generates more audience interest, such as the death of Jonah Lomu, can in effect create extra inventory.

characterised by such capacity constraints, Cournot modelling can be a better fit than Bertrand. However, while Cournot modelling may be consistent with some aspects of the industry, it may be less consistent with others. Cournot competition implies that firms' quantities are strategic substitutes: if one firm supplies less advertising, another firm supplies more in response. In contrast, with Bertrand competition prices are strategic complements: if one firm raises prices, another firm also raises prices in response. It is possible that the latter is a better fit to the advertising industry.

3.1.1. Bertrand modelling

We have applied a Bertrand merger simulation model to the advertising side of the market only, using the PCAIDS merger simulation approach. PCAIDS – proportionality-calibrated almost ideal demand system - was developed by Epstein and Rubinfeld (2002).[53] The PCAIDS model provides a simplification over other merger simulation techniques, requiring a relatively narrow set of inputs, thereby making the simulation "feasible" and "relatively easy to implement".[54] The AIDS demand system tends to yield predicted price increases that are higher than other demand systems (such as linear or logit demand),[55] making the results from PCAIDS relatively more conservative. It has also been applied by the Commission in previous merger investigations.[56]

The PCAIDS model requires three key inputs:

- Market shares for each firm;
- The market elasticity of demand; and
- The residual elasticity of demand for one of the firms in the market.

We set out the data we have used for each of these inputs in the sections below.

3.1.1.1. Market shares

Regarding market shares, NZME has provided us with data from SMI which, as noted earlier, records (New Zealand) advertising revenue earned through online and newspaper advertising by large media firms. The data only reflects revenue earned through agency advertising, so excludes any advertising revenue earned directly by media firms.

Using this data we have calculated market shares by agency advertising revenue for the year ended July 2015 (the most recent annual period available in the data that we were provided). For

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53 Roy J. Epstein and Daniel L. Rubinfeld (2002), "Merger Simulation: A Simplified Approach with New Applications", *Antitrust Law Journal*, 69(3), 883-919.

54 *Ibid*., at 885.

55 Philip Crooke, Luke Froeb, Steven Tschantz and Gregory J. Werden (1999), "Effects of Assumed Demand Form on Simulated Postmerger Equilibria", *Review of Industrial Organization*, 15, 205-217.

56 See, for example, *Decision 482* and *Decision 500*.

online advertising the media firms covered are Google, Facebook, Fairfax, NZME, TVNZ, YouTube, Trade Me, Yahoo! NZ, MediaWorks, Met Service and Microsoft. In addition, the data includes newspaper advertising revenue (again, through agencies) for Fairfax and NZME, and we have included this revenue in our calculation of market shares for Fairfax and NZME. Figure 19 shows the resulting market shares we have used.[57]

Figure 19
[ ]

3.1.1.2. Market elasticity of demand

As noted earlier, we do not have sufficient data from which to undertake econometric estimation of elasticities. In the absence of this, we have reviewed the literature on elasticities of demand for advertisers. Much of the literature is relatively old, and relates only to the elasticity for newspaper advertisers.[58] However, two more recent studies attempt to estimate the elasticity of demand for newspaper advertisers while attempting to account for the impact of online substitution. Filistrucchi et al (2012) find an elasticity of demand for newspaper of advertisers of -0.7, and account for the impact of online substitution by including time effects in their econometric analysis.[59] Fan (2013) estimates newspaper advertising demand elasticity of -1.2, and also uses time effects in her econometric analysis to capture online substitution.[60]

Neither of these studies is ideal, as they estimate only a residual demand elasticity for newspaper advertising (taking into account substitution to online advertising), whereas the input we require is an elasticity for the wider market segment of both newspaper and online advertising (whether on news websites or other websites). We have not come across any further literature that attempts to estimate elasticities for advertising demand for newspaper and online advertising together. Indeed, since the figures above only relate to newspapers, the market demand for both newspapers and online advertising may be more inelastic than the numbers presented above. Accordingly, as a conservative estimate of the market elasticity of demand for the PCAIDS model we use a more inelastic demand than the studies referred to above, of -0.5, but we also sensitivity test this.

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57 We have assumed no nesting – in other words, we assume diversion ratios proportionate to market shares.

58 We refer to some of this literature later in our report.

59 Lapo Filistrucchi, Tobias J. Klein and Thomas O. Michielsen (2012), "Assessing Unilateral Merger Effects in a Two-Sided Market: An Application to the Dutch Daily Newspaper Market", *Journal of Competition Law and Economics*, 8(2), 297-329.

60 Ying Fan (2013), ""Ownership Consolidation and Product Characteristics: A Study of the US Daily Newspaper Market", *American Economic Review*, 103(5), 1598-1628.

3.1.1.3. Residual elasticity of demand

The residual elasticity of demand in the PCAIDS model relates to one particular firm, which we assume to be Fairfax (but we also sensitivity test this using NZME). As with market elasticities, the data are not sufficient to allow econometric estimation of residual demand elasticities.

The Commission has previously noted that residual demand elasticities in differentiated products markets are typically in the range of -2 to -6.[61] Yang and Pickford (2011) survey a number of papers estimating residual demand elasticities in differentiated products markets, and find that these elasticities range from -1.5 to -6.3.[62] While the midpoint of both of these ranges is approximately -4.0, we cannot rule out the possibility that, if market demand is relatively inelastic (as explained above), then Fairfax's residual demand elasticity may be more inelastic than -4.0. To be conservative, we assume a residual elasticity of demand in our PCAIDS model of -3.

Using the above inputs, we have simulated the effects of the proposed merger in the PCAIDS model. The results, including some sensitivity testing, are provided in Appendix A.

3.1.2. Cournot modelling

Cournot modelling is typically applied in industries where:

- The product is relatively homogeneous – as noted earlier, we are advised that there is relatively limited differentiation from an advertiser's perspective regarding online advertising; and
- Production capacity is relatively fixed in the short-term and prices adapt so as to sell capacity. In this regard, sellers of online advertising typically have a fixed "inventory" of available advertising capacity.

A Cournot model is calibrated using the following data:

- Market shares, which are the same as applied in the PCAIDS model set out above, based on SMI data of (agency) advertising revenue for digital and newspaper advertising;
- The pre-merger market price. For this we use data on the average price charged by both NZME and Fairfax for online advertising. We estimate the weighted-average price across both of these firms, and assume that this is equal to the price for the overall advertising market;
- The pre-merger market volume, which we calculate by dividing total industry revenue (from the SMI data) by the pre-merger market price. We also calculate pre-merger advertising

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[61] *Decision 482*, at 152.

[62] Qing Gong Yang and Michael Pickford (2011), "Safe Harbours in Merger Guidelines: What Should They Be?", *Australian Economic Review*, 44(1), 13-35, and references therein.

volumes (in number of sold advertising impressions) for each firm, assuming that each firm's share of advertising volumes is the same as its share of advertising revenue; and

- Marginal cost (or variable cost as a proxy) for (at least) one of the players. We are advised that the main cost that is variable in regards to newspaper and online advertising is the commission paid to agencies. However, we calibrate our model by assuming a zero marginal cost for Google (the largest firm by revenue share). We take this approach because:
  - While we could use actual data to calculate the variable cost for both Fairfax and NZME for advertising (based on advertising commission),[63] doing so would lead to a calculated negative marginal cost for Google[64] (although we include a sensitivity test where we have nonetheless applied this approach);[65] and
  - We could assume a small positive marginal cost for Google, but this results in smaller price increases, so in this sense our approach is conservative (and, again, we include a sensitivity test where we assume a small positive marginal cost for Google).

We note also that, as with the PCAIDS model, we include newspaper advertising revenues in the market shares. While the market price and marginal cost used as inputs are expressed in terms of online advertising (i.e., price per sold advertising impression), we assume for modelling purposes that this is an applicable proxy for newspaper advertising.

Using the above inputs, we calibrate the Cournot model to estimate the pre-merger marginal costs of each firm, and then solve the post-merger model assuming Fairfax and NZME merge. We also assumed that the "merged" Fairfax-NZME firm takes the lower pre-merger marginal cost of the two firms, although we sensitivity test this assumption. The results of this Cournot merger simulation, including some sensitivity testing, are provided in Appendix A.

3.2. Elasticities

We have calculated the allocative efficiency detriments across a range of elasticities. The literature we have reviewed indicates that:

- Elasticity for newspaper advertisers is in the range of -0.4 to -1.2.[66] Some of this literature is relatively old, and does not capture the recent impact of online substitution, and accordingly

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63 We use this calculation of variable cost in our detriment calculations, and further details of our approach are provided later in this report.

64 Similarly assuming a zero marginal cost for a firm other than Google would also result in negative marginal costs of at least some other firms in the model.

65 In a Cournot model marginal costs are inversely proportional to market share.

66 See Alvin J. Silk, Lisa R. Klein and Ernst R. Berndt (2002), "Intermedia Substitutability and Market Demand by National Advertisers", *Review of Industrial Organization*, 20(4), 323-348, and references therein; Lapo Filistrucchi, Tobias J. Klein and Thomas O. Michielsen (2012), "Assessing Unilateral Merger Effects in a Two-Sided Market: An Application to the Dutch Daily Newspaper Market", *Journal of Competition Law and Economics*, 8(2), 297-329; Ying Fan (2013), ""Ownership Consolidation and Product Characteristics: A Study of the US Daily Newspaper Market", *American Economic Review*, 103(5), 1598-1628.

we do not use it. There are two more recent studies that do pick up this effect and give elasticities of -0.7 and -1.2;[67]

- Elasticity for newspaper readers is -0.4 from a relatively old study (and accordingly we do not use it),[68] or -1.75 from a more recent study that captures the impact of online substitution;[69] and
- We have not found any literature on elasticities for website news readers or advertisers.

We have also undertaken critical loss analysis, which is a quantitative tool used to assess the extent to which a price increase by the merged entity would be constrained by volumes switching to competing firms. Critical loss analysis allows us to determine the "critical elasticity" for a given price increase. At higher actual elasticities, imposing that price increase would not be profitable because of the increased volumes switching to competing firms.

The two-sided nature of media platforms has implications for critical loss analysis. Evans and Noel (2007) note that critical loss calculations based on one-sided markets are not correct when applied to multi-sided platforms.[70] However, undertaking critical loss analysis in two-sided markets is relatively complex, and requires estimates of elasticities for each side of the market, along with estimates of the cross-platform elasticities.[71] As noted earlier, we do not have sufficient data to robustly estimate such elasticities.

Accordingly, we apply the standard formula for critical loss analysis in a one-sided market, recognising that this may not be the correct approach.[72] If anything, however, this approach would be conservative: since the critical elasticity does not account for the cross-platform externality, the full impact of a price increase on demand is underestimated,[73] meaning that the critical elasticity is over-estimated (higher, in magnitude, than it otherwise would be). Since detriments are higher at higher elasticities, this approach is conservative.

In Appendix B we set out our estimates of the allocative efficiency detriments.

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67 Filistrucchi, Klein and Michielsen (2012), *op cit*, and Fan (2013), *op cit*.

68 James N. Dertouzos and William B. Trautman (1990), "Economic Effects of Media Concentration: Estimates from a Model of a Newspaper Firm", *Journal of Industrial Economics*, 39(1), 1-14.

69 Filistrucchi, Klein and Michielsen (2012), *op cit.*

70 David S. Evans and Michael D. Noel (2007), "Defining Markets That Involve Multi-Sided Platform Businesses: An Empirical Framework With an Application to Google's Purchase of DoubleClick", AEI-Brookings Joint Center for Regulatory Studies, Working Paper 07-18.

71 See Lapo Filistrucchi (2008), "A SSNIP Test for Two-sided Markets: The Case of Media", NET Institute, Working Paper #08-34.

72 We use the breakeven critical elasticity approach and a linear demand curve. See Gregory Werden (2002), "Beyond Critical Loss: Tailoring Applications of the Hypothetical Monopolist Paradigm", US DOJ Antitrust Division Economic Analysis Group Discussion Paper No. 02-9.

73 See Evans and Noel (2007), *op cit*.

Appendix A. CONFIDENTIAL: Bertrand and Cournot modelling results

A.1. Bertrand modelling

[ ]

A.2. Cournot modelling

[ ]

A.3. Conclusion for modelled price increases[74]

[ ]

[74] **[ ]**

Summary of competition issues and detriments

Table 4 we set out our views on the competitive effects of the merger, and our estimates of the allocative efficiency detriments (all figures shown are annual figures). Table 2 summarises the various calculated allocative efficiency detriment results.

We have also undertaken calculations of productive and dynamic efficiency detriments, using the approach of the Commission in the recent wool scouring authorisation:[75]

- Productive efficiency detriment (across all affected platforms) is in the range of **[ ]** per annum, based on applying a percentage factor of 1% to 5% to estimated variable costs; and
- Dynamic efficiency detriment (across all affected platforms) is in the range of **[ ]** per annum, based on applying a percentage factor of 0.5% to 1% to estimated revenue.

[ ]

We note, however, that if the demand curve is relatively elastic, a firm is unlikely to be able to impose a large price increase, and therefore the maximum points of the range are unlikely to be achieved.

As noted above, we have used critical loss analysis to inform us of the critical elasticity, which indicates the elasticity of the demand curve above which a given price rise would not be profitable. For example, for the Sunday newspapers, the critical elasticity on the reader side is **[ ]** for a **[ ]** price rise and **[ ]** for a **[ ]** price rise. At actual elasticities greater (in absolute terms) than these numbers, neither a **[ ]** nor a **[ ]** price rise could be imposed. We have therefore used the minimum of either the critical elasticity or the elasticities from the literature as the maximum elasticity at which the price rise could be imposed.

We have also reported, for context in

Table 4, the allocative efficiency detriment range as a percentage of revenue in the relevant market in which the calculation is made

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[75] Cavalier Wool Holdings Limited and New Zealand Wool Services International Limited [2015] NZCC 31.

Table 2
Summary of efficiency detriment results

[ ]

In Table 3 below we have balanced these detriments against the benefits and one-off costs **[ ]**, comparing the minimum benefits with maximum detriments and vice versa. We have calculated the five-year net present value (NPV), assuming a 10% discount rate. It can be seen that even adopting what we consider to be overly cautious price increase assumptions, the quantified detriments are much lower than the benefits.

Table 3[76]
Balancing of benefits and detriments

	Minimum benefit and maximum detriment		Maximum benefit and minimum detriment	
	Annual results	5-year NPV	Annual results	5-year NPV
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]
[ ]	[ ]	[ ]	[ ]	[ ]

[76] **[ ]**

Table 4
Summary of competition issues and detriments (per annum)[77]

Area of overlap	Competitive effects and detriments: advertising	Competitive effects and detriments: cover/subscription prices
Waikato Times and *New Zealand Herald* in Waikato	Evidence suggests competition for advertisers is relatively weak: ▪ Auckland advertisers are unlikely to view *Waikato Times* as a viable alternative as they would miss out on advertising to the larger Auckland market; ▪ Waikato advertisers are unlikely to view *Herald* as a viable alternative as they would pay a higher price but face fewer Waikato-based readers; ▪ NZME advised us that it **[ ]**; ▪ The evidence shows that national advertisers tend to advertise in both papers, which suggests an element of complementarity so as to reach a wider audience; ▪ *Waikato Times* advertising prices **[ ]**; and ▪ Advertising volumes have been falling for both	*Herald* and *Waikato Times* circulation volumes in the regions where they overlap[78] **[ ]**. However, we think that this is best explained by the extent to which both papers are competing with online news (as discussed earlier in this report), rather than competing between each other. Indeed, the pricing evidence suggests there is limited price competition between the two papers: ▪ *Herald* cover prices are **[ ]**; ▪ *Herald* subscriber prices **[ ]**; and ▪ *Waikato Times* cover prices **[ ]**. Also, particularly on the quality front, it is important to remember that this type of inter-metro overlap is rare in NZ – there is generally a single metro in each major city. **Detriment range: [ ]**

[77] The revenue and price data we received excludes GST, and therefore so do our reported detriment results.

[78] We have based the regions of overlap on the *Waikato Times* circulation area, as identified in Fairfax's *Waikato Times* advertising brochure (http://www.fairfaxmedia.co.nz/ArticleDocuments/206/WaikatoTimesAdvertisingSolutions2013.pdf.aspx).

	papers, consistent with the constraint from online advertising discussed earlier in this report. **No detriments**	**Range as % of reader revenue: [ ]** Key model parameters: Volumes: *Waikato Times* circulation volumes and *Herald* circulation volumes in the overlap regions. Prices: *Waikato Times* average prices. *Herald* revenue (from which we derive average prices) not available by region, so assume overall *Herald* price applies in Waikato. Variable costs: Fairfax and NZME data on print costs per unit for *Waikato Times* and *Herald* respectively.
New Zealand Herald and Fairfax community newspapers in Auckland	By bundling up several community papers, an advertiser could get similar eyeball exposure to using the *Herald*. However, **[ ]**, and the price of a bundle is **[ ]**. For example, advertising prices across bundled community papers (at approx. **[ ]** for bundling across 3 or more papers) are **[ ]** than advertising prices for the *Herald* (at **[ ]**). This suggests limited competition. However, as described below, some categories appear more competitive than others, as suggested by closer pricing. As described below, we have attempted to reflect the potentially narrow level of overlap by stripping out certain quantities. We are also advised by Fairfax that:	*Herald* and community papers are unlikely to be substitutes for readers because: ▪ The nature of the news content is different: *Herald* focuses on national/international news, while community papers have a more local focus; ▪ The delivery frequency differs: daily for *Herald* versus weekly, bi-weekly or tri-weekly for the community papers; and ▪ Pricing differs, with all community newspapers being delivered free. **No detriments**

- **[ ]**; and
- **[ ]**. The data supports this, with **[ ]** of the top 50 *Herald* display advertisers also advertising in the community papers, and even then many of these are local offices for a broader national business.[79]

Further, Fairfax data shows that advertising prices for the Auckland community newspapers **[ ]**.

There would also be constraint from other media (especially online), further mitigating the detriments.

Detriment range: [ ]
Range as % of ad revenue: [ ]

Key model parameters:

Volumes: *Herald* advertising volumes for motoring and real estate only, on the basis that **[ ]**. Fairfax advertising volumes for the same categories for community papers where advertising is bundled across 3 or more papers.[80]

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[79] For example, **[ ]**, while **[ ]**.

[80] Where advertisers purchase advertising space in either one or two of the Auckland community newspapers they would not face a sufficient number of readers to make the *Herald* a viable alternative. See, for example, Nielsen readership survey data showing *Herald* average issue readership of 415,000 in the period April 2014-March 2015. In comparison, across the two most widely read Auckland community newspapers (*Manukau Courier* and *Western Leader*) the average issue readership totalled 231,000 over the same period. See http://www.nielsen.com/content/dam/nielsenglobal/nz/docs/newspaperandmagazinecomparatives/newspaper-toplines-q2-2014-q1-2015.pdf

	Prices: *Herald* average advertising prices (for motoring and real estate only), and average advertising prices for community papers (for motoring and real estate only) where advertising bundled across 3 or more papers. Variable costs: we are advised that the main variable cost for advertising is agency commissions, and this only applies to advertising through agencies (so there are zero variable costs for direct, non-agency, advertising). We have used an assumption of **[ ]** commission paid to advertising agencies to calculate variable costs (i.e., variable costs is **[ ]** of agency advertising revenue for each of *Herald* and Auckland communities, and there are zero variable costs for direct advertising).[81]	
Hawke's Bay Today and *Dominion Post* in Hawke's Bay	Evidence suggests competition for advertisers is relatively weak: ▪ Wellington advertisers are unlikely to view *Hawke's Bay Today* as a viable alternative as they would miss out on advertising to the larger Wellington market; ▪ Hawke's Bay advertisers are unlikely to view *Dominion Post* as a viable alternative as they	The evidence suggests there is limited competition between the two papers: ▪ Only a small proportion (approximately **[ ]**) of *Dominion Post* volumes are circulated in the Hawke's Bay region; ▪ *Dominion Post* cover prices are **[ ]**; ▪ *Dominion Post* subscriber prices **[ ]**; and

[81] Since agency commission is **[ ]** of agency advertising revenue, then a price increase would also result in an increase in agency commissions and therefore variable costs. We have not captured this increase in our detriments calculations i.e., we have assumed a constant variable cost. This approach is conservative, as an increase in the variable cost would lead to lower detriments.

	face fewer Hawke's Bay-based readers; ▪ *Dominion Post* advertising prices **[ ]**; and ▪ Advertising volumes have been falling, consistent with the constraint from online advertising discussed earlier in this report. **No detriments**	▪ *Dominion Post* cover prices **[ ]**. **Detriment range: [ ]** **Range as % of reader revenue: [ ]** Key model parameters: Volumes: *Hawke's Bay Today* circulation volumes and *Dominion Post* circulation volumes in the Hawke's Bay region. Prices: *Hawke's Bay Today* and *Dominion Post* average prices (we assume overall *Dominion Post* price applies in Hawke's Bay). Variable costs: Fairfax data on print costs per unit for *Dominion Post*. We did not have data on *Hawke's Bay Today* print costs, so we use *Herald* print costs per unit as a proxy.
stuff.co.nz and nzherald.co.nz	The evidence suggests that a number of advertisers do use both websites. This might suggest that the two websites compete to have these advertisers switch more advertising spending to their website. However, any detriments would be mitigated by: other online substitutes, many of which are strong competitors (such as Google and Facebook); and the competition from other online news websites. On the evidence outlined earlier in this report both of these are strong competitive constraints. Furthermore, there is an expectation that an increasing proportion of volumes will be sold	The two websites appear to be close in product space. However, the detriments would be mitigated because other news websites would be able to reposition themselves, and news websites compete with other online platforms, for the reasons outlined earlier in our report. Furthermore, both websites have brand value and are established. It is likely that the merged entity would keep both, and reposition them, increasing product variety (and reducing duplication).

	through KPEX over time. Because the merging parties would not have any quantity or price control over these volumes, they can be stripped out. Accordingly we might expect the detriments to reduce over time, which could be captured in the 5-year NPV analysis. **Detriment range: [ ]** **Range as % of ad revenue: [ ]** Key model parameters: Volumes: NZME and Fairfax data on sold/monetised advertising impressions, excluding KPEX impressions. Prices: average revenue per sold impression for both websites. Variable costs: as above, the variable costs reflect commissions paid to advertising agencies. For Fairfax we have data on commission paid to advertising agencies. For NZME we have used an assumption of **[ ]** commission paid to advertising agencies to calculate variable costs (i.e., variable costs is **[ ]** of agency advertising revenue for www.nzherald.co.nz, and there are zero variable costs for direct advertising).	Because the existing price on the reader side is zero, we cannot calculate allocative inefficiency in the usual way. As discussed earlier, any inefficiency would probably arise from a reduction in quality rather than an increase in price, and we cannot sensibly quantify this detriment (and as noted elsewhere in this report, the two-sided nature of the platforms provides an incentive to maintain quality).
Sunday newspapers (*Sunday Star Times* and *Herald on Sunday*) in the North	There may be complementarity, and online alternatives, although the Sunday papers appear more distinct so the constraint may be less compared with weekday papers.	Some evidence suggests the papers are relatively close competitors. For example, internal documents of both Fairfax and NZME tend to focus on direct comparisons across the three Sunday

Island	The evidence suggests that the Sunday papers compete mostly for national advertisers, so we have assumed a national market for the purposes of our detriment calculation. **Detriments range: [ ]** **Range as % of ad revenue: [ ]** Key model parameters: Volumes: all *Herald on Sunday*, *Sunday Star-Times* and *Sunday News* advertising volumes. Prices: *Herald on Sunday*, *Sunday Star-Times* and *Sunday News* average advertising prices. Variable costs: as above, the variable costs reflect commissions paid to advertising agencies. We have used an assumption of **[ ]** to calculate variable costs (i.e., variable costs is **[ ]** of agency advertising revenue for each of the Sunday papers, and there are zero variable costs for direct advertising).	papers. However, competition only appears to occur in the upper North Island - the *Herald on Sunday* is not circulated in the South Island, and approximately **[ ]** of its sales volumes are in the upper North Island. In addition, Fairfax has advised us that **[ ]**. **Detriments range: [ ]** **Range as % of reader revenue: [ ]** Key model parameters: Volumes: all *Herald on Sunday* volumes,[82] and *Sunday Star-Times* and *Sunday News* circulation volumes in the upper North Island (north of Taupo). Prices: *Herald on Sunday* prices, and *Sunday Star-Times* and *Sunday News* average prices in the upper North Island. Variable costs: Fairfax and NZME data on print costs per unit for *Sunday Star-Times/Sunday News* and *Herald on Sunday* respectively. We do not have the *Sunday Star-Times/Sunday News* data at a regional level, so we assume the national print cost (per unit) also applies in the upper North Island.

[82] We have included the **[ ]** of *Herald on Sunday* volumes circulated in the lower North Island in our analysis, because we do not have data on revenue or prices in this region to be able to separate this out. We expect that this would only have a minor effect on our analysis.

Dominion Post and *New Zealand Herald* in Wellington	Unlikely to be any competition concerns as the papers appear to focus on distinct geographic areas. **No detriments**	Unlikely to be any competition concerns as the papers appear to focus on distinct geographic areas. **No detriments**
Regional dailies and communities newspapers in various regions	While this is difficult to assess in a tractable way given the large number of regional daily and community newspapers, there may be a similar issue to that identified above for *Herald* and Auckland communities, where the regional daily competes against community newspapers for bundled advertising. This might limit the regions in which there are detriments to the larger regions where there are multiple community newspapers, and in which the areas covered are generally contiguous. There might also be overlap for advertisers where community papers serve the same area. The overlap for advertisers occurs only in the North Island – there are no NZME regional dailies or community papers in the South Island. We assume that overlap for advertisers occurs: ▪ Between regional dailies and community newspapers when it is possible to bundle across three or more community newspapers in broadly contiguous areas; and ▪ Between community newspapers when the areas covered are similar. In addition, we understand that NZME has **[ ]**, so we have excluded this paper from our analysis.	The nature of the news content, frequency of delivery and pricing means regional dailies and community papers are unlikely to be substitutes for readers. While there may be some overlap amongst readers of community papers, because the existing price on the reader side is zero we cannot calculate allocative inefficiency in the usual way. As discussed earlier, any inefficiency would probably arise from a reduction in quality rather than an increase in price, and we cannot sensibly quantify this detriment (and as noted elsewhere in this report, the two-sided nature of the platforms provides an incentive to maintain quality).

This still leaves a large number of newspapers for which there is overlap, so as a tractable approach to quantifying detriments across all these newspapers we have taken advertising revenue for all the identified overlap regional daily and community papers, and determined the detriments by applying a percentage factor based on the detriments as percentage of *total*[83] ad revenue for Auckland communities and *Herald* (**[ ]** for the minimum of the range and **[ ]** for the maximum).

We note that there is a tension in basing this calculation off the Auckland communities/*Herald* overlap. On the one hand it could be an over estimate, because of **[ ]**. On the other hand it could be an under estimate, as it might be that competition between regional dailies and community papers in regions other than Auckland occurs over greater (relative) volumes than we have assessed for the Auckland communities/*Herald* overlap.

Detriment range: [ ]

Key model parameters:

Revenue: advertising revenue for all identified overlap NZME and Fairfax regional dailies and community newspapers. We only have this data

[83] We use total ad revenue, rather than ad revenue for the smaller competitive set used in our detriment calculation for the *Herald*/Fairfax communities overlap, so as to capture the same potentially limited range of overlap for all other regional dailies and community newspapers.

	for selected newspapers. For these we derive the relationship of ad revenue to circulation, and use the average relationship to derive ad revenue for the papers for which we do not have revenue data.	
Magazines (various titles)	Unlikely to be any competition issues – the few remaining Fairfax titles appear distinct from the NZME titles. **No detriments**	The magazine titles appear to be relatively distinct across Fairfax and NZME, so our view is that they are unlikely to be competing for the same readers. **No detriments**
Other non-news websites	As discussed earlier in this report, there is significant competition for online advertising, particularly from the likes of Google and Facebook that appear to have a competitive advantage. This is likely to continue to place competitive pressure on the merged entity in respect of the non-news websites. **No detriments**	The various non-news websites appear to be relatively distinct across Fairfax and NZME. While they may compete for audience share more generally, there are a large number of other websites also competing for audiences, some of which (such as Google and Facebook) are strong competitors. **No detriments**
Radio	There would be no aggregation of radio stations. It is possible there is some existing competition for advertisers between NZME's radio stations and Fairfax's other media (print and websites), but there would appear to be plenty of other advertising options. **No detriments**	We think it is unlikely that there would be material competition on the listener/reader side of the market, as there is no overlap in radio and the nature of radio compared to other products (print and websites) is distinct. **No detriments**

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