



# Behavioural Biases in Telecommunications

A review for the Commerce Commission

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# Executive summary

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The Commerce Commission (ComCom) is now required to collect information on telecommunications service quality, including factors such as customer service, billing issues, and performance. In future, this information will be required to be presented to consumers in a way that will assist them in making an informed purchasing decision. This represents an important opportunity to help improve the design and function of the telecommunications market to improve consumer welfare.

In March 2019, the Behavioural Insights Team was engaged by ComCom to research consumer behaviour in telecommunications markets. In this review, we focus on behavioural biases in telecommunications markets, with a particular focus on understanding how consumers choose providers and the barriers to shifting providers. Understanding these biases, and how they influence consumer choice, is crucial when designing a market. A well-functioning market will be designed such that it is navigable and human-friendly, and encourages positive behaviours from providers. To that end, the ultimate aim of the project is to provide recommendations on how to best use the data ComCom is collecting, and how best to present it back to consumers.

This review is organised around four common features of consumer behaviour in telecommunications.

## 1. Many consumers stick with the default

One of the most powerful forces in consumer markets is simply inertia - the vast majority of consumers stay with their incumbent service providers even when better options are available. This is consistent across countries and markets, and is true in the New Zealand context as well. This is despite switching costs being perceived as being relatively low.<sup>1</sup> Typically, older and longer-tenured consumers are less likely to switch, whilst some evidence suggests that more educated consumers are more likely to search and switch.

Evidence from other jurisdictions suggests that inertia is worsened by inattention – consumers who are less aware of the market and their own contract terms are less likely to switch. One factor that does appear to lead to switching, however, is a “trigger” event that disrupts the status quo – this may be an unexpected bill or a negative consumer experience. Perhaps most concerning, however, is the fact that evidence from energy markets suggest that even when consumers switch, they do not always select the best option – and a substantial proportion actually choose a worse option.

Bundling multiple services together also reduces the likelihood of switching. This is partly because it increases switching costs - for example, needing to find a provider that offers a

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<sup>1</sup> Commerce Commission (2018a). Study of mobile telecommunications markets in New Zealand. Accessed at [https://comcom.govt.nz/\\_\\_data/assets/pdf\\_file/0025/94255/Study-of-mobile-telecommunications-markets-in-New-Zealand-Issues-paper-31-August-2018.pdf](https://comcom.govt.nz/__data/assets/pdf_file/0025/94255/Study-of-mobile-telecommunications-markets-in-New-Zealand-Issues-paper-31-August-2018.pdf)

similar deal, or coordinating with multiple providers. However, it should be noted that there can be substantial benefits to bundling. Consumers typically value the convenience and cost savings, and there is some evidence that it has encouraged the take-up of technology.

Open data initiatives have been suggested as one potential solution by regulators in other jurisdictions— these aim to allow consumers to use their own data to compare providers and choose the plan best suited to them. As part of this review, BIT was asked to review any evidence about the effectiveness of these regimes. However, evidence from other jurisdictions is mixed, with limited examples of major successes. In addition, initiatives that essentially go beyond open data (for example, not only providing data, but also providing the results of searches using that data) also see very low rates of switching. This suggests that open data initiatives may not actually resolve low switching rates in a meaningful way, and more concentrated efforts might need to be taken.

## **2. Consumers are poor at estimating their future needs**

Consumers consistently fail to accurately estimate their future usage – which is problematic when almost all telecommunications plans involve some sort of usage-based charge. There is evidence that some consumers underestimate their usage (often leading to ‘bill shock’), whilst others overestimate their usage. Overestimation can lead to consumers choosing plans that cost them more than necessary - some consumers with variable usage will minimise costs if they choose a plan which covers their average usage, and simply pay extra in the months when they exceed their average usage. However, relatively few consumers do this - instead, many choose more expensive plans that greatly reduce their likelihood of paying excess charges in any month (and as a result, they end up paying more than they need in many months where their usage is not as high).

Two effects may explain this behaviour – loss aversion (where consumers are especially sensitive to losses and seek to avoid them) and ambiguity aversion (where consumers prefer options that are certain, even if more expensive). Essentially, consumers may perceive exceeding their usage as a loss, and may choose a more expensive plan with greater inclusions as ‘insurance’ against having to face the uncertainty of possibly exceeding their plan allowance. In New Zealand, one provider has created a product that has the potential to overcome these issues – Spark’s ‘Unplan’ essentially offers three prices depending on usage, with fixed maximum price.

Notably, loss aversion and ambiguity aversion may provide some insight as to how information about service quality and reliability could be presented – framing this information as a negative (e.g., unreliability) might be more effective at capturing consumer attention.

## **3. Consumer focus more on present benefits, and less on future costs**

A broad range of literature shows that consumers overweight present benefits and costs, and underweight future benefits and costs. As a result, telecommunications providers – like most firms – use present bias to draw in deals by offering large up-front bonuses that are immediate one-offs or have an expiry date. As a result, consumers may make suboptimal decisions which have long-term impacts – for example, through signing up to a plan with an initial discount, but then failing to switch once the discount has expired.

#### 4. More choices and complex pricing can lead to worse outcomes for consumers

Experimental and empirical research has shown that as the complexity of choices in a market grows, the number of consumers making the best choice decreases. This can either be through more complexity in the nature of pricing structures, or simply from a greater number of options. Indeed, empirical evidence suggests that as the number of options in a market increases, the number of consumers making the optimal choice decreases.

Beyond simply the volume of options, markets have other ways of causing confusion. Indeed, theoretical evidence shows that if consumers are subject to making worse choices when confused, then firms in a market actively have an incentive to further confusion by creating a 'confusopoly'. In telecommunications this can manifest in the form of 'foggy pricing' – presenting a product or plan that is strictly inferior to another from the same firm.

In the New Zealand context, the confusopoly has famously been an issue in the telecommunications market.<sup>2</sup> Notably, we identify one example of a provider that appears to not only have a confusing way of presenting some prices, but may well be engaging in 'foggy pricing'. However, even without these extreme cases, normal practices can easily add to confusion. Including incentives such as subscriptions to streaming services or other discounts, can add to confusion – their value can be difficult to separate from the overall plan value, and they can be difficult to compare.

Whilst in theory price comparison websites could help consumers make these decisions, they are often fraught with similar issues. Indeed, we highlight one example where a website provides a very confusing array of options, in a manner which hides which plan is actually the cheapest.

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<sup>2</sup> Nowak, P. (2006, 6 May), Gattung admits Telcos not being straight, *New Zealand Herald*

# 1. Telecommunications markets in NZ

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## 1.1 Importance of the telecommunications market

In New Zealand, the telecommunications industry is important to consumer welfare: almost all New Zealanders use mobile or fixed-line services, which are crucial for engaging with a wide range of social, economic and government services. New Zealand has relatively cheap mobile plans (for example, entry level plans are 36% below the OECD average),<sup>3</sup> a high availability of service (94% of the population has 3G and 4G access),<sup>4</sup> and fast download speeds.<sup>5</sup>

The ubiquity and importance of the telecommunications industry also raises challenges: for example, it is the industry ComCom receives the most fair trading complaints about.<sup>6</sup> The telecommunications sector is also subject to extremely rapid rates of technological change. At present, this has been reflected in trends of use and availability. For example, internet speeds are increasing,<sup>7</sup> data use for both fixed and mobile broadband is increasing,<sup>8</sup> and subscriptions and 'unlimited' plans are increasing.<sup>9</sup>

## 1.2 The situation today

### The mobile market

There are three mobile network operators (MNOs) in New Zealand, as shown in Figure 1: Vodafone, Spark and 2degrees. Competition has increased and prices decreased since 2degrees entered in 2009, with the exception of high-volume bundles and standalone mobile data. Switching rates are similar between the three MNOs. There are also smaller mobile virtual network operators (MVNOs) who provide mobile services but use infrastructure from the MNOs (i.e. they purchase wholesale and sell retail). Current MVNOs include Warehouse Mobile and Vocus, while Trustpower and Kogan will soon enter the market as MVNOs. Skinny is also a mobile provider, operating as a division of Spark.

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<sup>3</sup> Commerce Commission (2018b). Annual telecommunications monitoring report: 2018 key facts. Report. Accessed at [https://comcom.govt.nz/\\_\\_data/assets/pdf\\_file/0016/111292/2018-Annual-Telecommunications-Monitoring-Report-18-December-2018.pdf](https://comcom.govt.nz/__data/assets/pdf_file/0016/111292/2018-Annual-Telecommunications-Monitoring-Report-18-December-2018.pdf)

<sup>4</sup> Commerce Commission (2018a), op. cit.

<sup>5</sup> Ibid.

<sup>6</sup> Commerce Commission (2017). Consumer Issues 2016/17. Accessed at [https://comcom.govt.nz/\\_\\_data/assets/pdf\\_file/0028/89092/Consumer-Issues-Report-2016-17.pdf](https://comcom.govt.nz/__data/assets/pdf_file/0028/89092/Consumer-Issues-Report-2016-17.pdf)

<sup>7</sup> Commerce Commission (2018b), op. cit.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

**Figure 1: New Zealand's mobile network operators and mobile virtual network operators**



\* Note that Skinny is strictly a division of Spark rather than a MVNO. Also note that two new MVNOs are entering the market: Trustpower (who will buy from Spark), and Kogan (who will buy from Vodafone).

However, customer service and satisfaction is a key issue - Consumer NZ surveys show that satisfaction with mobile services is at the lower end, compared to other industries, whilst MBIE surveys suggest relatively high levels of mistrust and problems with services.<sup>10</sup>

### The fixed-line and broadband market

The majority of New Zealand's phone line and fibre-broadband infrastructure is owned by Chorus, who split from Spark's predecessor (Telecom) in 2011. Chorus will also own 70% of the fibre broadband infrastructure when the rollout is complete.<sup>11</sup> By law, Chorus can only sell to retailers and not directly to consumers.<sup>12</sup> The other 30% of the fibre infrastructure is owned by three smaller companies, each part owned by a Crown entity and part-owned by local government or local electricity lines companies.

The use of this fixed-line infrastructure is then sold to retail providers, who go on to sell internet and fixed-line phone services directly to consumers. Figure 2 shows the main internet service providers (ISPs) in New Zealand, along with their market share as measured by the number of connections. The *Other ISPs* category includes a large number of small ISPs, many of whom provide internet to rural New Zealanders.

Yet customer satisfaction with fixed-line providers is relatively low: just 51% of consumers were happy with the service from their internet provider.<sup>13</sup> Furthermore, satisfaction rates are

<sup>10</sup> Commerce Commission (2018a), op. cit.

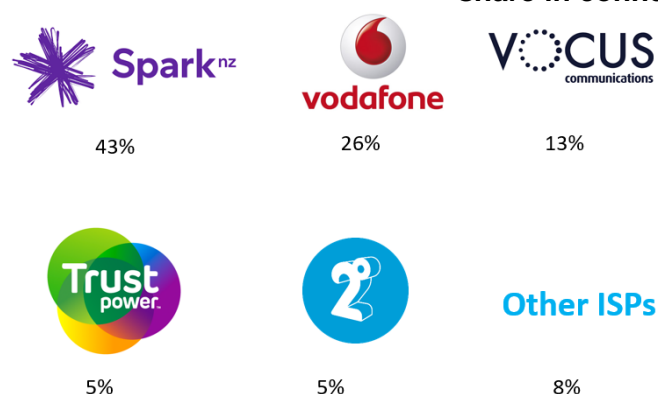
<sup>11</sup> Crown Infrastructure Partners (n.d.). About. Accessed at <https://www.crowninfrastructure.govt.nz/about/>

<sup>12</sup> Telecommunications Act 2001 No 2013. Section 69S. Accessed at <http://www.legislation.govt.nz/act/public/2001/0103/latest/whole.html>

<sup>13</sup> Consumer NZ (2019). Telco survey: Mobile and internet service providers. Accessed at <https://www.consumer.org.nz/articles/telco-providers>. Note that the survey does not distinguish fibre

among the lowest for the two largest providers (49% for Spark and 47% for Vodafone).<sup>14</sup> Common issues reported by consumers (from a list of options) include slow data speeds, disconnections, long customer service wait times, and unhelpful customer service.<sup>15</sup>

**Figure 2: New Zealand's main internet service providers and their 2018 market share in connections<sup>16</sup>**



### 1.3 Complexity and the confusopoly

Behind this consumer frustration, the telecommunications market provides consumers with a wealth of options that can be difficult to navigate. Despite relatively few providers serving the majority of the market, consumers face complex decisions, such as the option to purchase multiple services (e.g., broadband, mobile) in a single instance, as well as the need to distinguish between complex pricing and quality indicators. The complicated nature of these may encourage providers to intentionally exploit consumers' biases, meaning consumers may be less likely to switch providers, or more likely to make sub-optimal purchasing decisions.<sup>17</sup>

In addition to potential incentives for providers to create a 'confusopoly',<sup>18</sup> the value of a telecommunications product varies beyond the immediate product and provider. For example, access to telecommunications services is vital in an emergency, and future usage may vary depending on context. For example, the value of the service may increase if a consumer starts a new relationship or begins using a data-intensive media service. Some of the key dimensions of quality for mobile service are network coverage, availability of service, mobile broadband speeds, and customer service.<sup>19</sup> However, consumers are

[broadband from VDSL and ADSL connections, and complaints about speed may be more likely for non-fibre internet.](#)

<sup>14</sup> Ibid.

<sup>15</sup> Ibid.

<sup>16</sup> Commerce Commission (2018b), op. cit.

<sup>17</sup> Akerlof, G. A., & Shiller, R. J. (2015). *Phishing for phools: The economics of manipulation and deception*. Princeton University Press.

<sup>18</sup> Kalaycı, K. (2016). Confusopoly: competition and obfuscation in markets. *Experimental Economics*, 19(2), 299-316.

<sup>19</sup> Commerce Commission (2018a), op. cit.



influenced by more than just long-term quality. For example, indicators from comparison sites suggest that cheap contracts, no lock-in contracts, and easy set up are influential.<sup>20</sup> For businesses in New Zealand, the most important factors appear to be reliability of coverage, good customer service, and competitive pricing.<sup>21</sup>

As consumers often purchase a (new and novel) device with a contract, this impacts their ability to make optimal decisions. Specifically:

- It makes it difficult for consumers to accurately assess their future needs (e.g., data requirements or use of a new hardware device).
- The gratification provided through telecommunication services - such as access to new entertainment prospects - is intense and immediate.

This means that people may be more likely to pay attention to the immediate benefits and be less likely to pay to the long term consequences. This, as well as a number of other features, predisposes the industry to potential behavioural failures.

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<sup>20</sup> Canstar Blue (2018). Broadband Providers NZ. Retrieved from <https://www.canstarblue.co.nz/phone-internet/broadband/>

<sup>21</sup> UMR Research (2015). Competition for business customers in the mobile industry: a report for the Commerce Commission

## 2. Consumer behaviour in telecommunications markets - behavioural biases

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The nature of telecommunication markets means that users are susceptible to various behavioural biases. Providers may, knowingly or unknowingly, exploit these biases, meaning that consumers make suboptimal decisions. Below, we highlight some of the most common behavioural biases in telecommunications markets.

### 2.1 Many consumers stick with the default

When a person faces several options, the *default* option is the one that will be taken up if the person takes no action. For example, in many countries adults are defaulted into pension schemes, which has a dramatic influence on retirement savings.<sup>22</sup> Inertia is a powerful force - consumers will often stay with the perceived default, even when there are gains from switching (commonly called *status quo bias*).<sup>23</sup> In telecommunications, this manifests itself in the form of consumers sticking with their incumbent provider at high rates.

Shifting consumers from the default option is difficult, but some solutions could include:

- **Allowing rival firms to directly target long-tenured customers.** This might be done by creating a reverse-auction, whereby the right to target long-tenured customers was provided to the firms that offered the best deals.
- **Encouraging the growth of automatic switching services.** An automatic switching service would only require market participants to act once to take up the service – after that, the default would then be that they would be automatically switched to a superior plan if it was available.

### Only a small number of consumers switch telecommunication providers

Globally, switching in general across telecommunications remains low. The level of immobility varies, but as an example, every country across Europe sees at least a third of consumers never having switched provider. Some countries see as high as two thirds never having switched.<sup>24</sup> Switching rates in New Zealand are also low - for example, Consumer NZ's 2018 surveys show that 43% of people have not switched internet providers in the last 5 years, and 54% have not switched mobile providers.<sup>25</sup> Notably, customers with a longer tenure are generally less likely to switch.<sup>26</sup> Combined with low overall rates of switching, this

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<sup>22</sup> Beshears, J., Choi, J. J., Laibson, D., & Madrian, B. C. (2009). The importance of default options for retirement saving outcomes: Evidence from the United States. In *Social security policy in a changing environment* (pp. 167-195). University of Chicago Press.

<sup>23</sup> Samuelson, W., & Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of risk and uncertainty*, 1(1), 7-59.

<sup>24</sup> Lunn, P. D., & Lyons, S. (2018). Consumer switching intentions for telecoms services: evidence from Ireland. *Heliyon*, 4(5)

<sup>25</sup> Consumer NZ (2018). Telco survey: Mobile and internet service providers.

<sup>26</sup> Yang, M (2013) Churn Management and Policy: Measuring the Effectiveness of Fixed-Mobile Bundling on Mobile Subscriber Retention, *Journal of Media Economics*, 26:4, 170-185

suggests that the majority of consumers are relatively inert, whilst the observed switching behaviour represents a minority of consumers that regularly switch.

### **Switching costs in New Zealand are perceived as low**

Switching costs refer to both the monetary and non-monetary costs (e.g., search time, 'hassle factor') associated with swapping to a new product or service. In New Zealand, many of the costs that a perfectly 'rational' consumer would consider barriers are relatively low. For example, mobile number portability has been introduced, and it is relatively easy to unlock handsets that are locked to a network (though Vodafone and Spark charge \$30 to unlock a handset bought less than 9 months ago).<sup>27</sup> Reflecting this, most consumers (69%) in New Zealand report that it is easy to switch mobile providers.<sup>28</sup> Similarly, early termination fees were reported as a barrier to switching by only 14% of consumers who considered switching, and those who did switch reported positive experiences.<sup>29</sup>

### **Inattention is a major driver of low switching rates**

Inattentive consumers refer to those that do not actively consider the optimal option, and instead repeat previous behaviour without further thought. A large proportion of consumers are inattentive - for example, a Norwegian survey found that over 2 in 3 mobile service users reported that they either 'don't know' how often they looked at offerings from other providers, or look at alternative offerings less than once a year.<sup>30</sup> In New Zealand, surveys suggest 68% of mobile consumers 'rarely' or 'never' compare plans offered by different mobile service providers.<sup>31</sup> The attention consumers pay to components of their own plan also predicts switching. For example, a Spanish survey found that consumers who reported that they 'don't know' whether their plan included termination fees were less likely to switch.<sup>32</sup> In New Zealand, inertia and customer satisfaction were the primary reasons reported for not switching.<sup>33</sup> As consumers in this market are inattentive, it is likely that a large proportion are 'satisficing' – that is, accepting the minimally acceptable plan for themselves, rather than the optimal plan.

### **Consumers that are older and have had a longer tenure are less likely to switch**

Data that looks at actual switching behaviour (i.e., does not use a proxy measure) suggests that older consumers and women are less likely to switch mobile provider.<sup>34 35</sup> Consumers

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<sup>27</sup> Commerce Commission (2018a). op. cit.

<sup>28</sup> Ibid.

<sup>29</sup> Commerce Commission (2012). op. cit.

<sup>30</sup> Sæthre, M., Reme, B.-A., & Lie Røhr, H. (2018). The Poking Effect: Price Changes, Information, and Inertia in the Market for Mobile Subscriptions. SSRN Electronic Journal. doi:10.2139/ssrn.3288472

<sup>31</sup> Consumer NZ (2018). op. cit.

<sup>32</sup> García-Mariñoso, B., & Suárez, D. (2018). Switching mobile operators: Evidence about consumers' behavior from a longitudinal survey. *Telecommunications Policy*.

<sup>33</sup> Commerce Commission (2012). op. cit.

<sup>34</sup> Ranganathan, C., Seo, D., & Babad, Y. (2006). Switching behavior of mobile users: do users' relational investments and demographics matter?. *European Journal of Information Systems*, 15(3), 269-276.

<sup>35</sup> Islam, M. Z., D'Alessandro, S., Furner, M., Johnson, L., Gray, D., & Carter, L. (2016). Brand switching pattern discovery by data mining techniques for the telecommunication industry in Australia. *Australasian Journal of Information Systems*, 20.

who have never switched before are especially unlikely to switch - for example, in an Australian study, only 2 of 174 consumers who considered switching but had never switched before proceeded to switch in the following 12 month period (relative to 58% of those who had previously switched between 1 and 12 times).<sup>36</sup>

### **Many consumers will only switch in response to a triggering event**

As inattention is a driver of consumer behaviour in telecommunication markets, it often takes something that 'breaks' the status-quo for consumers to switch provider. For example, receiving a bill that is much higher than expected ('bill-shock') is strongly associated with switching.<sup>37</sup>

There is also evidence that smaller prompts - such as a notification in changes to a plan - can also cause switching. For example, a Norwegian telecommunication provider notified 270,000 consumers of changes to their mobile subscription via SMS. Following the notification, and before the new price was introduced, consumers were approximately three times as likely to switch providers than the 6 months preceding the notification. Interestingly, while this effect was larger in those that were worse off under the new plan (ranging from 1 to 4 percentage points more likely to switch), consumers who were better off under the new plan were also more likely to switch. Specifically, they were between 0.5 and 1 percentage points more likely to switch, reflecting a 50 to 80 percent increase relative to the preceding 6 month period.<sup>38</sup> The authors conclude that the notification prompted consumers to 'wake up' to the typical inertia seen in telecommunication markets. Notably, however, in absolute terms, the level of switching was still very low.

### **The least vulnerable consumers are benefiting from switching the most**

One study conducted in Ireland examined search behaviours for broadband plans on a major Irish comparison website and linked this back to census data in the local area. They found that higher social status and higher education areas showed above average search behaviours. Areas with lower social status (unskilled, manual workers and farmers), more older people, and more people coming to the area from outside Ireland, all had lower than average searches for broadband. This suggests that those in advantaged areas are utilising more effective searching strategies, and/or more likely to switch. As the authors state "*the highly educated are more aware of the potential benefits from and are better equipped to navigate the complexities of the market*".<sup>39</sup> Mobile provider switching is also linked to education, though an Australian study suggests there may not be a relationship between mobile switching and income itself.<sup>40</sup>

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<sup>36</sup> Ibid.

<sup>37</sup> Lunn, P. D., & Lyons, S. (2018). op. cit.

<sup>38</sup> Sæthre, M., Reme, B.-A., & Lie Røhr, H. (2018). op. cit.

<sup>39</sup> Carthy, P., Lunn, P., & Lyons, S. (2018). Demographic variation in active consumer behaviour: Who searches most for retail broadband services?. *MPRA Paper No. 90366*

<sup>40</sup> Ibid.

## **When consumers switch, they do not always select a better plan**

Navigating the telecommunications market is complex, and identifying the best plan may be challenging. For example, in energy, one study from the UK found that when switching, consumers typically appropriated about half the gains on offer, and only 7% selected the cheapest option on offer. Moreover, approximately a third of those switching actually made a worse decision.<sup>41</sup> It is possible that this effect is aggravated in the telecommunications market as the product itself is more complex in nature (i.e., offerings in telecommunications can have multiple components, whereas energy is a relatively homogenous good).

## **Bundling offers advantages, but increases switching costs**

Bundling is when two or more services are offered as a single package. Bundles are often offered with unlimited minutes<sup>42</sup> and bundles can reduce both upfront and ongoing costs, such as through subsidising hardware and allowing users to pay it off over time. Common bundles include:

- Providing mobile services together in one subscription, such as data, minutes and text messages
- The provision of mobile, landline, and broadband services, sometimes including other services such as television and, more recently, power
- Providing of services and hardware (e.g., mobile plans and handsets)
- Family bundles, where more than one person is on a plan. These often allow for users to share data and or calls/minutes

While there are advantages to bundling, there are concerns that bundles can reduce price transparency through increasing complexity, and reduce switching.

## **Bundling increases consumer retention and reduces switching**

While bundling does not necessarily involve a lock-in contract, it does increase the costs of switching. For example, if a consumer has purchased a handset on a plan, switching requires that they pay a large amount of money in a single instance to pay off the handset. In New Zealand, consumers may also have to pay back any subsidy on the handset. Similarly, as there are more services, all of the “frictions” and costs (perceived and actual) of switching multiply. For example, switching two services means finding either another similar deal, or coordinating with multiple providers to arrange the switch.

Reflecting this, one study in South Korea found that bundling a mobile with a fixed line was the most effective way to increase retention (i.e., reduce switches).<sup>43</sup> Another study in Spain found similar results. Specifically, bundling a landline with a mobile reduced the likelihood of switching by a quarter. When multiple mobile services were bundled, this had an even larger

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<sup>41</sup> Wilson, C. M., & Waddams Price, C. (2010). Do consumers switch to the best supplier?. *Oxford Economic Papers*, 62(4), 647-668.

<sup>42</sup> Commerce Commission (2018). op. cit.

<sup>43</sup> Yang, M (2013) op. cit.

effect, reducing the likelihood of switching by half.<sup>44</sup> This may be because, in the instance of multiple mobile users (i.e., under a multiple mobile service bundle), switching cost are increased as users may need to coordinate the preferences of multiple people.

At a qualitative level, consumers report valuing the convenience of bundles. For example, an EY report explored UK broadband users' attitudes to bundles. They found that consumers strongly valued bundles from a single provider because it meant they had a single point of contact for customer service, and valued the convenience of a single bill, and also found that consumers who had more services bundled were more likely to be satisfied with their provider.<sup>45</sup> Other common advantages of bundles include reducing the search time required to find multiple services, providing all-in-one installation, and bundles can be cheaper than purchasing services separately (though this is not always the case).

### **Bundling can increase uptake of new technologies, which has positive flow-on effects**

Bundling can offer various advantages for individual consumers, such as streamlined set up of hardware (e.g., the carrier connecting the hardware to the network on the spot) and lower upfront costs (e.g., carrier-subsidised handsets). Evidence from Belgium and Finland suggests that these efficiencies benefit the system as a whole. Both countries banned handset bundling on the basis that it was anti-competitive (e.g., prevented independent retailers selling handsets to customers). They both then reversed the ban after widespread dissatisfaction, due to the high price of handsets and difficulty coordinating hardware and software set-up.

The removal of these bans increased consumer adoption of new technologies. Specifically, the authors examined the growth in 3G connections per 100 citizens. When the bans were lifted, the number of 3G connections increased faster than similar European countries.<sup>46</sup> Notably, this has positive flow-on effects - the more people that adopt a technology, the more infrastructure and content utilising that technology is developed. The authors suggest that this increases demand, creating a virtuous circle and increasing the quality of the overall system.

### **Can open data initiatives improve switching and competition?**

Open data initiatives allow consumers to use their own historic data to compare providers and choose the plan best suited to them. Initiatives aim to make the process of obtaining a consumer's own data, and using it for comparative purposes, as easy as possible, in order to facilitate competition.

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<sup>44</sup> García-Mariñoso, B., & Suárez, D. (2018). op. cit.

<sup>45</sup> EY (2013) *The Bundle Jungle A closer look at consumer attitudes towards buying broadband, telephony and TV*. Retrieved from [https://www.ey.com/Publication/vwLUAssets/EY\\_The\\_Bundle\\_Jungle/\\$FILE/EY-The-Bundle-Jungle.pdf](https://www.ey.com/Publication/vwLUAssets/EY_The_Bundle_Jungle/$FILE/EY-The-Bundle-Jungle.pdf)

<sup>46</sup> Hazlett, T. W., Oh, S., & Skorup, B. (2014). Natural experiments in mobile phone regulation: Estimated effects of prohibiting handset bundling in Finland and Belgium. *George Mason Law & Economics Research Paper*, (14-17)



However, open data initiatives are unlikely to make a significant impact. Firstly, the broad concept of “open data” can have many practical ways of being implemented - from data automatically being transferred, through to more manual processes requiring customers to download a spreadsheet, and then upload it to another site. These small frictions can have outsized impacts on take up - and each additional friction can steadily reduce the proportion of people that follow through with the behaviour.

Secondly, evidence from other jurisdictions is mixed. For example, the UK has previously introduced the “Midata” regime for data access, and introduced a service to encourage comparison of bank accounts in 2015.<sup>47</sup> However, this service does not appear to have noticeably affecting switching - in fact, despite the introduction of the Midata regime, the number of current accounts that switched have declined every year since 2014,<sup>48 49</sup> with less than 2% of current accounts switching in any given year.<sup>50</sup>

Most relevantly, interventions that go beyond open data initiatives have proven to have some success in relative terms, but in absolute terms there is still significant room for improvement. For example, Ofgem in the UK tested the effect of providing information directly to long-tenured consumers (some of whom could save up to a thousand pounds) about the best energy deals for them, based on their usage. In effect, this was taking the concepts of open data to the next level - not only was the data available to customers, but the letter involved taking the data, using it to find alternatives, and presenting these back to the consumer.

Whilst the best performing letter tripled switching rates, this was from a base of 1% - in other words, the best outcome still only saw 3% of customers switching.<sup>51</sup> This reinforces the concept discussed above, namely that many consumers do not even come close to switching, and do not switch for extended periods of time. More concentrated efforts might need to be taken, especially with long-tenured customers that have not switched. This might include making it easier for competitors to directly market to these individuals – for example, by providing the contact details of long-tenured customers (with their consent) to competitors with better offers. It may also include encouraging the development of automatic switching services.<sup>52</sup>

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<sup>47</sup> Jones, R. (2015, 26 March) New comparison tool to offer best current accounts launched, *The Guardian (UK)* <https://www.theguardian.com/money/2015/mar/26/new-comparison-tool-to-offer-best-current-accounts-launched>, accessed on 18 March 2019

<sup>48</sup> Blakey, D. (2018) UK current account switching rates on the rise, *Retail Banker International*, <https://www.verdict.co.uk/retail-banker-international/news/current-account-switching-rates-uk-2018/> accessed on 18 March 2018

<sup>49</sup> BACS UK (2019) Current Account Switch Service Dashboard, Issue 21, [https://www.bacs.co.uk/DocumentLibrary/CASS\\_dashboard\\_-\\_published\\_30\\_Jan\\_19.pdf](https://www.bacs.co.uk/DocumentLibrary/CASS_dashboard_-_published_30_Jan_19.pdf) accessed on 18 March 2018

<sup>50</sup> Traenor, J. (2018, 18 June) Don't bank on it: Why we fail to switch our accounts, *BBC News*, <https://www.bbc.com/news/business-44522630> accessed on 18 March 2018

<sup>51</sup> Ofgem. (2017). *Results from the Cheaper Markets Offers Letter Trial*. Retrieved from <https://www.ofgem.gov.uk/publications-and-updates/results-cheaper-market-offers-letter-trial>

<sup>52</sup> Costa, E., King, K., Dutta, R., & Algate, F. (2016). Applying behavioural insights to regulated markets

## 2.2 Consumers are poor at estimating their future needs

The literature regularly finds that consumers fail to accurately estimate their own future needs and behaviours, and in particular, may be overconfident about their ability to do so.<sup>53</sup> In telecommunications, this leads to consumers struggling to judge how much data, calls, and text messages they will use in a given period. There is substantial evidence that consumers demonstrate this overconfidence, with research suggesting consumers regularly overestimate or underestimate their future consumption (though some evidence suggests that consumers do gradually learn over time).<sup>54</sup> This may be magnified in the case of services that include data such as mobile and broadband - use of these services may shift rapidly as new services or applications are developed, which consumers are unlikely to be able to predict in advance.

Some strategies to mitigate the impact of mis-estimation include:

- **Providing clear warnings and updates to consumers about their usage.** This is to ensure that consumers do not exceed their allowed usage – many firms now include this as standard practice.
- **Encourage the development of plans that allow more flexible usage patterns.** For example, Spark's 'Unplan'.

One way that mis-estimation plays out is through some consumers underestimating usage, and, in particular, the costs of exceeding included usage. This can lead to “bill shock”, which particularly hurts lower-income consumers, as they are likely to be less able to cope with unexpected financial shocks. Notably, some initiatives have been put in place to prevent this - for example, many providers will typically provide warnings to customers as they approach their limits, and when they exceed them. However, despite these measures, it is still an issue in the New Zealand market.<sup>55</sup>

### Consumers regularly overestimate their usage

Conversely, there is evidence that many consumers regularly overestimate their usage. Even though some consumers would pay less on a pay-as-you-go plan (or a lower fixed-price plan with charges for occasional overages), many consumers are on fixed plans (or fixed plans with very large allowances).<sup>56</sup> That is, if consumers were looking to minimize costs, they would select plans that resulted in the lowest *average* invoice by choosing a lower plan and paying for occasionally exceeding it. However, many consumers choose plans which mean that they rarely, if ever, pay excess charges - and, as a consequence, they often end up paying for far more usage than they need in months where their usage is lower.

<sup>53</sup> Grubb, M. D. (2015). Overconfident consumers in the marketplace. *Journal of Economic Perspectives*, 29(4), 9-36.

<sup>54</sup> Grubb, M. D., & Osborne, M. (2015). Cellular service demand: Biased beliefs, learning, and bill shock. *American Economic Review*, 105(1), 234-71.

<sup>55</sup> Venuto, D., (2018, 7 March) Auckland mum shocked with \$2500 Spark bill for going 8GB over data allowance, *New Zealand Herald*. Retrieved from [https://www.nzherald.co.nz/business/news/article.cfm?c\\_id=3&objectid=12007987](https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12007987)

<sup>56</sup> Gerpott, T. J. (2009). Biased choice of a mobile telephony tariff type:: Exploring usage boundary perceptions as a cognitive cause in choosing between a use-based or a flat rate plan. *Telematics and Informatics*, 26(2), 167-179.



Two behavioural effects may help to explain this behaviour. The first is *loss aversion*, whereby individuals feel the pain of a loss more intensely than the pleasure of an equivalent gain.<sup>57</sup> In this case, whilst the “cost” of having a plan with unused value is not particularly clear, the cost of going over the allocated allowance is a very salient and prominent cost. This cost is typically felt as a “loss”, particularly if consumers have mentally allocated a certain portion of expenditure on telecommunications.<sup>58</sup>

The second is the *ambiguity effect* or *ambiguity aversion*, which describes the tendency for people to select options for which the probability of a favourable outcome is known, and to avoid ambiguity or uncertainty.<sup>59</sup> In some ways, a higher fixed plan is also a form of insurance against uncertainty - it allows consumers to “not worry” about their consumption. They can have certainty about the amount that they will pay - even if it is slightly more on average, it avoids the uncertainty that a lower plan with overages (or a pay-as-you-go plan) might have.

Indeed, one study that analysed consumer usage patterns and compared them against available tariffs found that instances of “tariff mismatch” were most likely to occur for consumers with high levels of variability for SMS, calls or internet data.<sup>60</sup> That is, consumers who have especially variable consumption are the most likely to be on the ‘wrong’ tariff, and be the most likely to be paying a premium for certainty. It is likely that some users may also prefer the convenience of using services without feeling “the ticking of the taxi meter” which press them to evaluate, at every moment, the need of use and costs of service. This can be mentally taxing, and may also be seen as an unpleasant experience.

Notably, the ambiguity effect, combined with status quo bias (discussed above) can see consumers staying in sub-optimal plans. For example, research suggests that in 2015, consumers in the UK were paying £355 million a year more than needed by staying with carriers after their handsets were paid off.<sup>61</sup>

The ambiguity effect may also explain some of the lack of switching behaviour - consumers may be wary of leaving a known supplier for an unknown alternative. Evidence from the UK suggests that this plays at least some role in reducing switches (among others).<sup>62</sup>

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<sup>57</sup> Tversky, A., & Kahneman, D. (1991). Loss aversion in riskless choice: A reference-dependent mode. *The Quarterly Journal of Economics*, 106(4), 1039-1061.

<sup>58</sup> Gerpott, T. J. (2009). op. cit.

<sup>59</sup> Ellsberg, D. (1961). Risk, ambiguity, and the savage axioms. *The Quarterly Journal of Economics*, 75(4), 643-669.

<sup>60</sup> Gerpott, T. J., & Meinert, P. (2017). Choosing a wrong mobile communication price plan: An empirical analysis of predictors of the degree of tariff misfit among flat rate subscribers in Germany. *Telematics and Informatics*, 34(4), 303-313.

<sup>61</sup> Costa, E., King, K., Dutta, R., & Algate, F. (2016). op. cit.

<sup>62</sup> Xavier, P., & Ypsilanti, D. (2010). Behavioral economics and telecommunications policy. *Regulation and the evolution of the global telecommunications industry*, 83-106.

## One provider has developed a product that may overcome mis-estimation

One provider has created a product that has the potential to overcome some of these issues for consumers. Spark offers the 'Unplan' for broadband - this offers three prices, dependent on usage during a given month, with a fixed maximum price (see right).<sup>63</sup> In this way, it offers a degree of certainty (and insurance) that costs will never rise above a certain, fixed amount - but it also caters to those who are likely to use less. The 'Unplan' may represent a compromise that allows consumers who have variable usage (or who have lower usage but are concerned about occasional overages) to have some of the advantages of a variable plan, but retain the certainty that a higher, fixed price plan brings.

**Figure 3: The 'Unplan' offers three separate price tiers for data usage, meaning that it caters for users that have variable usage**

### The Unplan

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The one broadband plan with three easy price tiers that you move between based on your monthly data usage.

Priced from\*

- \$65 for less than 60GB
- \$75 for between 60GB and 120GB
- \$85 for usage above 120GB

You can add a landline to Unplan for an additional \$10 per month.

Note: Unlimited on Fibre, restrictions on Wireless. \*Price tiers increase with speed upgrades.

[Get Unplan for 12 months](#)

## Incorporating biases when framing information can help increase consumer attention

Building on from this, loss aversion and ambiguity aversion also have implications for how information might be presented about reliability or service quality. If consumers are particularly concerned about losses, and keen to avoid ambiguity, reliability and service quality information should be framed as a negative to make it more salient.

That is, focusing on *unreliability*, or quality *failures*, might be more effective at drawing consumers' attention. For example, this might mean that instead of representing network reliability as a positive ('90% uptime'), it could be reframed as a negative ('10% downtime').<sup>64</sup> This reframing highlights the potential ambiguity and potential losses that a consumer faces (i.e., the lack of service or lack of reliability represents a potential loss of quality), and may be an effective way of drawing attention to these issues.

<sup>63</sup> <https://www.spark.co.nz/shop/internet/unplan/>, accessed on 4 April 2019

<sup>64</sup> Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211(4481), 453-458.

## 2.3 Consumers focus more on present benefits, and less on future costs

*Present bias* refers to the finding that people overweight benefits and costs that are current, and underweight costs and benefits that are in the future. For example, credit cards allow consumers to enjoy immediate gratification while deferring costs to a later date. This means that present bias has been used to explain ‘buy-now, pay-later’ schemes, as well as credit card debt.<sup>65</sup>

In telecommunications, this means that people focus more on the immediate, salient features of a contract such as a new phone with new functionalities, rather than the long-term costs (e.g., having an overpriced plan, or a lower-quality plan). It also means that other short term costs - such as the expected amount of time switching will take - can alter behaviour.<sup>66</sup> For example, longer expected wait times are associated with lower switching rates in mobile, broadband, and fixed-line services.<sup>67</sup>

Some strategies to overcome present bias include:

- **Requiring the provision of the cost for a full year for any plans.** This would help to put the value of any benefit into context, and allow for easier comparison between plans where, for example, some months were free or discounted.
- **Requiring the provision of the total minimum cost of a contract.** Again, this will help to improve comparability between plans, and provide a single figure for comparison between plans that have different cost structures and benefits.

### Telecommunications providers use present bias to draw in consumers

As consumers pay more attention to immediate gains, advertising immediate benefits is likely to be an effective marketing strategy for telecommunications firms - as it is for firms in many other markets. For example, many providers predominantly advertise the hardware that is sold with plans, rather than the plans themselves. For consumers, acquiring a new handset provides a tangible and immediate source of gratification, whereas the details of the plan may be perceived as abstract and distant. While this strategy may utilise (or exploit) present bias, it still offers some advantages to the consumer, such as streamlined set-up processes.

In other instances, providers have used this strategy with irrelevant products. For example, one provider offered the option of including a barbeque as part of a plan (see Figure 4).<sup>68</sup> Another strategy is through using time-limited offers. This can include covering the costs of a service for an allotted time. For example, Spark offers free 6 month Netflix subscriptions as

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<sup>65</sup> Meier, S., & Sprenger, C. (2010). Present-biased preferences and credit card borrowing. *American Economic Journal: Applied Economics*, 2(1), 193-210.

<sup>66</sup> We note that in some instances this may not be attributable to present bias. For example, if a service is sufficiently poor, the expected gains from having a service installed immediately may outweigh the long-term costs (e.g., needing better internet to search for a job).

<sup>67</sup> Waddams Price, C., & Zhu, M. (2016). Empirical evidence of consumer response in regulated markets. *Journal of Competition Law & Economics*, 12(1), 113-149.

<sup>68</sup> <https://www.slingshot.co.nz/>

part of a 12 month contract.<sup>69</sup> This leads to a perceived discount or added benefit. However, the benefit is only short term (i.e., only the first half of the contract).

**Figure 4: An example of a provider making use of present bias**

*Summer Shout*

Join Slingshot on selected plans and grab a Weber® BBQ, Tablet or a Fitbit.

Join Now

See offer Terms & Conditions here

Plan	Price	Additional Info
150GB	from \$69.95/month	Fibre
Unlimited	from \$84.95/month	Fibre
Gigantic	from \$99.95/month	Download speeds up to 700-900Mbps

We also saw time-limited offers on price comparison websites. For example, the prices displayed on a major comparison website in New Zealand highlight the short-term discounted (or free) price. This can be seen in Figure 5. We will discuss how price comparison websites (PCW’s) display pricing information in section “Complex pricing causes consumer confusion and mistakes”.

**Figure 5: Short-term discounts advertised on a major broadband comparison website**

Offer	Price	Duration
Unlimited Fibre	from \$0.00/mo	3 months FREE broadband on 12mth co...
Unlimited Fibre	from \$0.00/mo	3 MONTHS FREE - Exclusive to Broadb...
Unlimited Fibre 100	from \$42.48/mo	6 MONTH HALF PRICE

<sup>69</sup> Canstar Blue (2018). Broadband Providers NZ. Retrieved from <https://www.canstarblue.co.nz/phone-internet/broadband/>

**Present bias means that consumers may make decisions which are not in their long-term interests**

Present bias means that consumers may not pay attention to the details of the plan, or may be less likely to engage in active research or comparison activities. This means that they may select suboptimal plans - for example, plans that include unreasonable lock-in contracts, are expensive, or have poor quality indicators. As consumers are inattentive, they may stay in plans that they initially selected for a short-term gain for a long period of time - for example, after paying off the initial piece of hardware, or after the initial discount has expired.

**Considering present-bias when engaging consumers may help promote positive searching strategies.**

The nature of providers' advertising - specifically that they often focus on advertising hardware rather than plans - suggests that consumers may be receptive to considering switching when they are looking for a new device. This means that promoting positive search strategies at this time is beneficial. For example, through advertising comparison sites or communicating data initiatives to consumers around the time the latest version of popular devices (e.g., iPhone) is released.

## 2.4 More choices and complex pricing can lead to worse outcomes for consumers

A common aim for many regulators is to promote greater competition and thus greater choice. However, this requires that consumers actively consider, and have the capacity to compare, all of the options available. In telecommunications markets, consumers are faced with multiple choices (even when considering options from the same provider). Additionally, these options are often difficult to directly compare due to the complexity of available offerings.

To avoid confusion:

- **Prices should be easily comparable between providers and plans.** As with the previous section, this means using consistent ways of presenting prices (for example, per month or annual costs).
- **Providers should use metrics that are consistent across providers.** In addition to comparable pricing, other relevant metrics (such as included features) should be consistent and comparable between providers.
- **Providers should not offer 'dummy' options.** There should not be any options that would never make sense for anyone to purchase (because they would always be better off with another option from the same provider).

### **When there are more options available, consumers make poorer choices**

There is substantial evidence that greater choice can actually lead to worse outcomes, as consumers face 'choice overload'.<sup>70</sup> This is where consumers become overwhelmed by the choices on offer, and either disengage, stick with the default, or make a sub-optimal choice.

There is substantial evidence that this occurs in regulated markets such as telecommunications. Note, that while much of the evidence draws from energy markets, it is likely that similar concepts are at play in telecommunications. Indeed, the energy market is arguably an even simpler market (with a relatively homogenous product), and hence any concerns about confusion and complexity are if anything magnified in a market such as telecommunications, where there are additional factors such as quality, reliability, and varying offers and products.

Experimental evidence suggests that as a market becomes more complex - either through more complex tariffs, or through a market with more options - the level of sub-optimal choices increase.<sup>71</sup> That is, a more complex option leads to consumers being more likely to make a choice that 'leaves money on the table', by not selecting the cheapest option for them. This is supported by empirical evidence from energy markets in the UK - one notable study found that as the number of options in a local market increased, the number of

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<sup>70</sup> Chernev, A., Böckenholt, U., & Goodman, J. (2015). Choice overload: A conceptual review and meta-analysis. *Journal of Consumer Psychology*, 25(2), 333-358.

<sup>71</sup> Sitzia, S., Zheng, J., & Zizzo, D. J. (2015). Inattentive consumers in markets for services. *Theory and Decision*, 79(2), 307-332.

consumers making optimal choices decreased.<sup>72</sup> Perhaps most concerning, the study found that about a third of consumers switched into a deal that was worse than their original deal.<sup>73</sup>

Another interesting finding from experimental work is that adding a simultaneous task to simulate the effect of inattention has a powerful effect on suboptimal choices - that is, a lack of attention drives even larger sub-optimal choices, beyond that of the effect of complexity.<sup>74</sup>

### **Complex pricing causes consumer confusion and mistakes**

Beyond the simple volume of options available, there are also other ways that market options can cause detriments. Consumers are particularly susceptible to complexity in pricing, in ways that can be exploited to further confusion (often referred to as a 'confusopoly'). For example, as the presentation of prices becomes more complex and non-standardised, the ability of consumers to correctly identify the cheapest option decreases significantly.<sup>75</sup> Similarly, there is evidence that consumers struggle more with prices that are vectors (i.e., a per-unit consumption figure), as opposed to scalar (i.e., a fixed amount). Adding in complexity, or multi-part tariffs, also leads to poorer decision making by consumers.<sup>76</sup>

In addition, a range of theoretical work has shown that if consumers are subject to making sub-optimal choices when confused, then market operators have an incentive to further confusion in the market<sup>77</sup> (especially in an oligopolistic market<sup>78</sup>), usually by increasing complexity.

### **Providers may use 'foggy pricing' to confuse consumers**

One way that firms can do this is through "foggy pricing",<sup>79</sup> which was particularly common in US telecommunications. 'Foggy pricing' describes a phenomenon where companies offer choices that are strictly dominated - i.e., there is another alternative from that firm that is either equivalent or superior for all customers. It is likely that these are introduced largely to increase confusion.<sup>80</sup> For example, one researcher highlighted the following example from AT&T in 2014 (see Figure 6).

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<sup>72</sup> Wilson, C., & Price, C. W. (2005). Irrationality in consumers' switching decisions: when more firms may mean less benefit. *ESRC Centre for Competition Policy*, University of East Anglia August.

<sup>73</sup> Ibid

<sup>74</sup> Sitzia, S., Zheng, J., & Zizzo, D. J. (2015). op. cot.

<sup>75</sup> Sugden, R., & Zheng, J. (2017). Do consumers take advantage of common pricing standards? An experimental investigation. *Management Science*, 64(5), 2126-2143.

<sup>76</sup> Grubb, M. D. (2015). Failing to choose the best price: Theory, evidence, and policy. *Review of Industrial Organization*, 47(3), 303-340.

<sup>77</sup> Spiegler, R. (2016). Choice complexity and market competition. *Annual Review of Economics*, 8, 1-25.

<sup>78</sup> Handouf, S., Arabi, S., Sabir, E., & Sadik, M. (2016, November). Telecommunication market share game: Inducing boundedly rational consumers via price misperception. In 2016 *IEEE/ACS 13th International Conference of Computer Systems and Applications (AICCSA)* (pp. 1-7). IEEE.

<sup>79</sup> Miravete, E. J. (2013). Competition and the use of foggy pricing. *American Economic Journal: Microeconomics*, 5(1), 194-216.

<sup>80</sup> Grubb, M. D. (2015). Failing to choose the best price: Theory, evidence, and policy. op.cit.



**Figure 6: ‘Foggy’ pricing display<sup>81</sup>**

DataConnect Plans for:

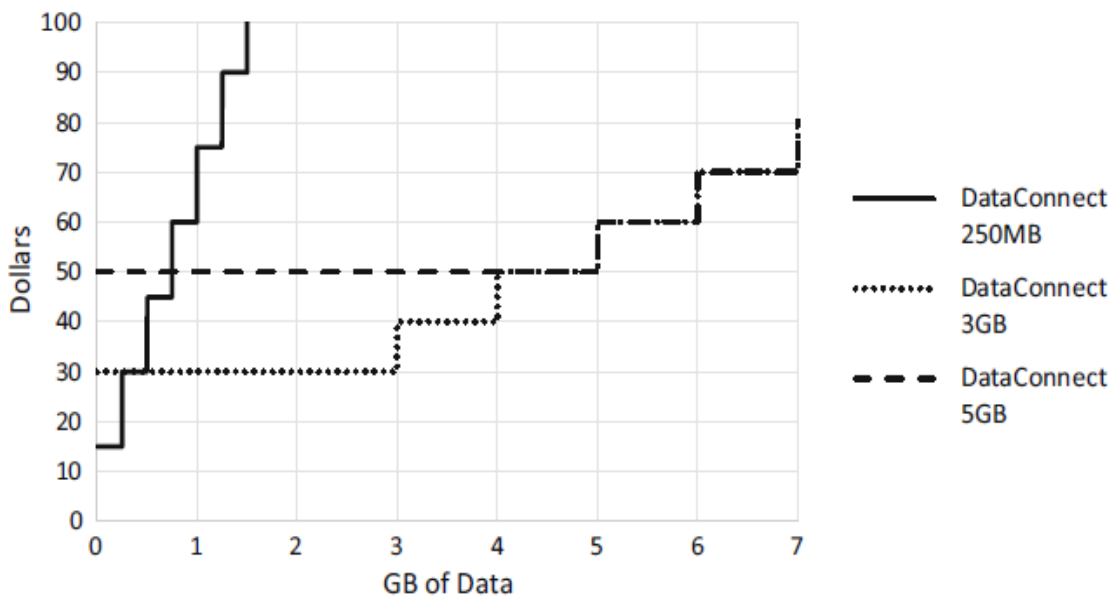
iPad, Tablets, Camera and Gaming Devices

Data ?	Plan Charges	AT&T Wi-Fi Access ?	Domestic Overage Fees ?	Canadian Data ?	International Data ?	
DataConnect 250MB	\$14.99	✓	\$14.99 per 250 MB	\$0.015/KB	\$0.0195/KB	<a href="#">Add</a> <a href="#">View details</a>
DataConnect 3GB	\$30.00	✓	\$10.00 per 1 GB	\$0.015/KB	\$0.0195/KB	<a href="#">Add</a> <a href="#">View details</a>
DataConnect 5GB	\$50.00	✓	\$10.00 per 1 GB	\$0.015/KB	\$0.0195/KB	<a href="#">Add</a> <a href="#">View details</a>

5GB plan is strictly dominated by 3GB

It is not immediately obvious, but the DataConnect 5GB plan is strictly dominated by the 3GB plan - no matter what level of consumption a user has, they will always pay less or the same if they are on the DataConnect 3GB plan. Not only that, but the way the information is presented makes this harder to identify. A more transparent way of displaying prices would make the comparison more obvious (see Figure 7).

**Figure 7: transparent pricing scheme<sup>82</sup>**



<sup>81</sup> Ibid

<sup>82</sup> Ibid



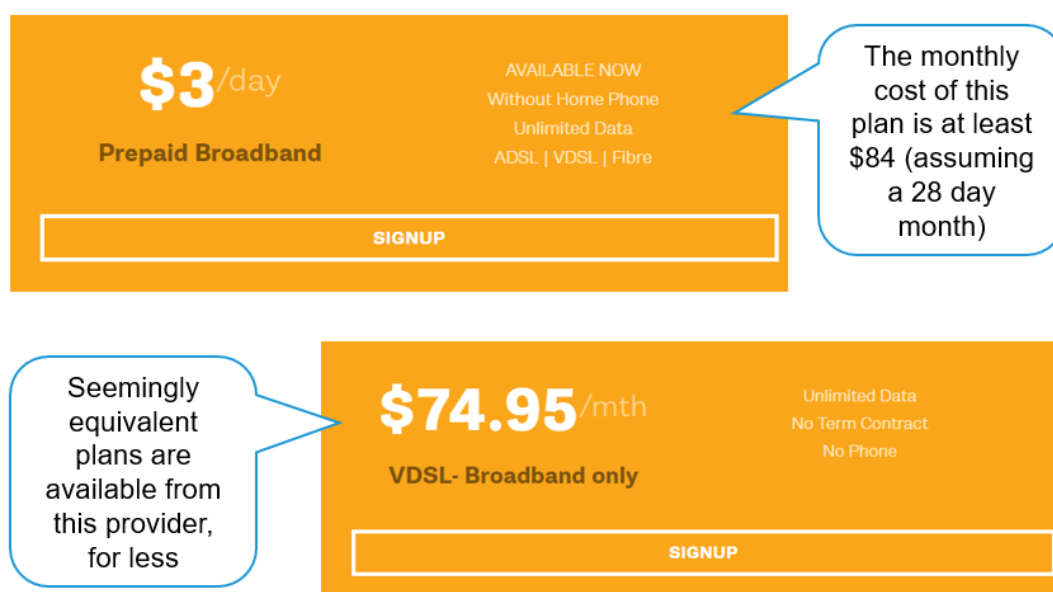
### These effects are likely present in the New Zealand market

It is likely that similar effects are at play in the New Zealand market. Indeed, the former CEO of (then) Telecom New Zealand famously remarked *“Think about pricing. What has every telco in the world done in the past? It’s used confusion as its chief marketing tool. And that’s fine.”*<sup>83</sup> Whilst contemporary telecommunications firms are rarely this candid, it is likely that this is still present to some extent.

For example, currently in the New Zealand market one provider offers prepaid or “pay by the day” broadband. The provider advertises the daily cost, and also displays equivalent prices in weekly and fortnightly increments - however, it does not provide the equivalent monthly increment. This is particularly likely to cause confusion in the broadband market, as almost all other broadband plans in the market are offered - and priced - on a monthly basis (including other plans by this provider). Arguably, this may be partly due to the monthly cost fluctuating, depending on the number of days in a month. However, it would still be possible to provide indicative figures to enable comparisons - this could be in the form of a range for the monthly cost (as all months are between 28-31 days), or an equivalent average monthly figure.

Nonetheless, this is not the only aspect of the product and pricing that may cause confusion. The provider claims elsewhere on their website that prepay customers do not pay more than other customers. However, even when multiplying the daily figure by 28 (to obtain the absolute minimum monthly cost), a prepaid broadband plan appears to be almost \$10 more expensive than other plans *that are offered by the same provider*. On the surface, these other plans appear to be more or less equivalent (in terms of technology, speed, contract duration, and data allowances) - the only difference appears to be the fact that some plans are offered prepaid, whilst others are post-paid.

**Figure 8: Potentially confusing pricing of broadband plans in the New Zealand market**



<sup>83</sup> Theresa Gattung, former CEO of Telecom New Zealand, 2006.

Even where providers do not have confusion in their own internal pricing structures, the way that their separate offers combine could also contribute to confusion. For example, many providers provide a range of incentives such as subscriptions to streaming services. Whilst these subscriptions have monetary value, their inclusion likely has the impact of further obfuscating prices, as it is slightly more difficult to separate the cost of the streaming service (especially when the subscription only last for a year).

The inclusion of incentives also makes direct comparisons between different options difficult, especially when different providers have inclusions that are similar, but subtly different. For example, both Vodafone and Spark offer streaming subscriptions with some of their mobile plans. However, Vodafone offers 1 year's Netflix subscription,<sup>84</sup> whilst Spark offers 24 months of Spotify Premium.<sup>85</sup> Whilst the notional monthly cost of these subscriptions is the same, the fact that they differ in duration and in their essential quality (television vs music) makes them very difficult to compare directly - and this is before considering all the other features of the respective plans.

### **Price comparison websites may help some consumers, but also have shortcomings**

Conceptually, price comparison websites (PCWs) have the potential to help consumers overcome complexity in the market. However, in reality they have a number of shortcomings that mean they are not as effective as they could be. Consumers may lack trust in PCWs because of intermediary charges and limited scope.<sup>86</sup> In fact, some theoretical research suggests that price-focused PCWs can actually make consumers worse off because of extra charges.<sup>87</sup>

In New Zealand, some internet-plan PCWs show pricing that is not easily comparable by default, which may only worsen confusion among consumers. The user can select a different filter to make comparisons clearer, but this takes effort and may be missed by many users. For example, the screenshot in Figure 9 is taken from a current PCW that compares broadband plans - the first two plans are shown as "\$0/month", with much smaller explanation that this applies for the first 3 months (the cost is \$84.95 after the first 3 months). The third plan is shown as costing \$62.99 each month.

Setting aside the issue of showing "\$0/month" in such a prominent fashion given the disclaimer, there is a broader issue in that it is not immediately obvious which would be cheaper for a consumer in either the short-term or long-term. Indeed, based on our calculations and the information about fees presented in this display, the \$62.99 plan will actually come out cheaper over the course of a single year (12 months @ \$62.99 = \$755.88, vs 9 months at \$84.95 = \$764.55). And, after the first year, this disparity will only widen further - yet the more expensive plans are presented as the first items that consumers see, in a way that suggests that they are the better deal.

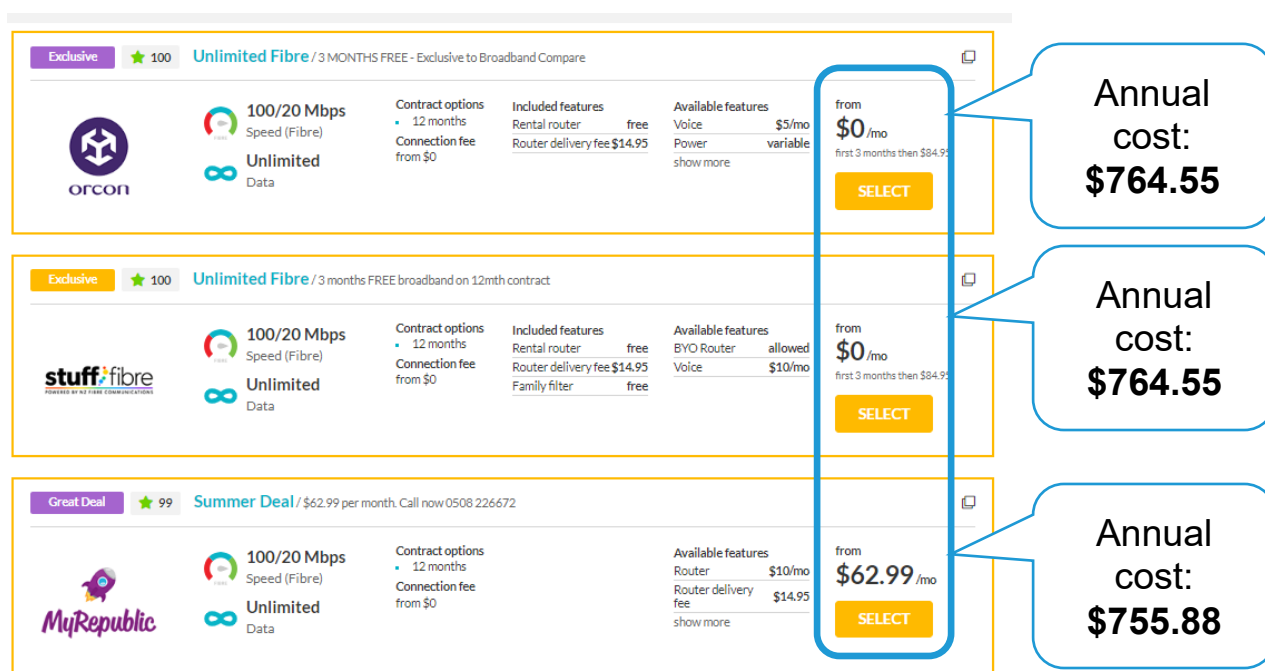
<sup>84</sup> <https://www.vodafone.co.nz/pay-monthly/>, accessed 4 April 2019

<sup>85</sup> <https://www.spark.co.nz/shop/mobile-plans/paymonthly.html>, accessed 4 April 2019

<sup>86</sup> Gamper, H. C. (2012). How Can Internet Comparison Sites Work Optimally for Consumers? *Journal of Consumer Policy*, 35(3), 333–353.

<sup>87</sup> Ronayne, D. (2018). Price Comparison website. Retrieved from <https://ageconsearch.umn.edu/record/270227/>

Figure 9: results from a New Zealand PCW<sup>88</sup>



Finally, PCWs that compare only on price may disadvantage higher-quality providers (and hence consumers), as the quality is not captured or highlighted.<sup>89</sup> In New Zealand, for example, most internet-plan PCWs focus on price, though one comparator does use market research to measure other dimensions of customer satisfaction for the main providers.<sup>90</sup>

<sup>88</sup>Results for an address in Wellington from <http://broadbandcompare.co.nz>, accessed on 21 March 2018

<sup>89</sup> Gamper, H. C. (2012). op. cit.

<sup>90</sup> Canstar Blue (2018). Broadband Providers NZ. Retrieved from <https://www.canstarblue.co.nz/phone-internet/broadband/>