

# NEW ZEALAND RETAIL PRICES FOR FIXED LINE AND MOBILE SERVICES

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A BENCHMARKING COMPARISON

November 2010



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### Notice of Disclaimer

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### Exchange Rate

Note that all foreign prices are converted to \$NZ using purchasing power parity (PPP) exchange rates.

## EXECUTIVE SUMMARY

This report benchmarks New Zealand retail prices for fixed-line and mobile voice and broadband services. Retail price benchmarking gives an indication of the competitiveness of New Zealand telecommunications markets relative to other countries, by comparing prices paid for telecommunications services by consumers in New Zealand with the prices paid by overseas consumers.

For voice (and SMS) services, benchmarking has been carried out for 34 OECD countries.<sup>1</sup> For broadband the Commission undertook its own benchmarking. New Zealand prices have been compared to those in Australia, the UK, Norway and Sweden. The report specifically compares New Zealand prices to those in Australia, New Zealand's largest trading partner.

The key findings of the report are:

### Fixed-line services

#### *Voice*

New Zealand is generally ranked in the bottom third of the OECD for fixed-line voice pricing. New Zealand's ranking is 33 out of 34 for the 20 calls (low usage) basket, 29 out of 34 for the 140 calls (medium usage) basket, 23 out of 34 for the 420 calls (high usage) basket and 19 out of 33 for the 260 calls business basket. New Zealand consumers who make few calls pay the highest monthly line rental in the OECD for a fixed-line telephone service.

For residential customers, New Zealand's poor ranking is driven mostly by a high monthly line rental that includes local calling, which has the effect of making "free" local calling expensive for low users. There is no alternative to plans that have a fixed price for unlimited local calls. This favours those consumers who make a lot of local calls and disadvantages those who make few.

Telecom is permitted to increase its standard residential line rental by no more than the rate of inflation each year. Due to a lack of infrastructure-based competition in most areas of New Zealand and wholesale pricing set at a discount to retail, there is little other constraint on Telecom's ability to increase its monthly line rental or offer alternative plan types. Therefore, the standard residential line rental has consistently increased each year in line with the rate of inflation.

New Zealand also has relatively high fixed-to-mobile prices which contribute to its poor ranking in the OECD benchmarking.

#### *Broadband*

For low and medium levels of usage (2GB and 10GB per month), the pricing of New Zealand broadband plans is broadly in line with that observed in the four other countries benchmarked by the Commission. New Zealand's ranking is 3 out of 5 for the low usage basket and 2 out of 5 for the medium usage basket.

However, for high levels of usage (40GB+), New Zealand's broadband pricing is significantly higher than observed in other countries (with a ranking of 5 out of 5). It is often argued that the cost

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<sup>1</sup> The benchmarking is against the current 33 OECD countries plus Estonia which is an accession candidate.

for international bandwidth resulting from New Zealand's isolated geographic location is significant. However, Australia, which faces similar conditions in the supply of international bandwidth, has prices which are significantly lower than New Zealand for higher levels of usage (although Australia has higher prices than New Zealand for the low and medium usage baskets).

## **Mobile services**

### ***Voice and SMS***

Mobile voice usage is low in New Zealand relative to other countries, with the average number of calls being closest to the 30 calls per month basket. However, average SMS usage is relatively high, with the average number of text messages being more than double the 100 used in the low usage basket.

For the 30 calls (low usage) basket New Zealand performs relatively well, with a ranking of 9 out of 34 OECD countries. For higher levels of usage New Zealand's ranking deteriorates significantly, at 20 out of 34 for the 100 calls (medium usage) basket and 25 out of 34 for the 300 calls (high usage) basket.

New Zealand's pricing for text messaging is relatively low compared to other OECD countries, with a ranking of 14 out of 34 for the 400 messages basket.

### ***Broadband***

#### *Mobile data cards*

Mobile data prices are currently relatively expensive compared to other countries, particularly for high data usage. New Zealand is ranked 5<sup>th</sup> out of the 5 countries included in the benchmarking set for both the 2GB and 8GB usage baskets. The high pricing of mobile broadband services in New Zealand, combined with relatively low data caps, is likely to limit the degree of fixed-to-mobile substitution for broadband services.

#### *Mobile phone data*

The Commission has benchmarked the price of purchasing 200MB of data as an add-on to a mobile phone plan. New Zealand is ranked 5<sup>th</sup> out of the 5 countries included in the benchmarking, with the price of 200MB of data being significantly more expensive in New Zealand than the other countries benchmarked.

#### *Recent developments*

2degrees has recently released Mobile Broadband Zone Data Packs which provide blocks of 1GB, 3GB and 12GB of data in areas where it has network coverage. This data is lower priced than that available from Vodafone and Telecom. However, it is likely that 2degrees' ability to compete in the mobile broadband market remains constrained due to the limited geographic coverage of its network which currently covers Auckland, Wellington, Christchurch and Queenstown.

### **Comparison with Australia**

For fixed-line voice plans Australia is generally as poorly ranked as New Zealand, or even worse, in OECD benchmarking.

For fixed-line broadband, New Zealand is cheaper than Australia for low and medium usage (2GB and 10GB), but 31 per cent more expensive for high usage (40GB+).

In OECD benchmarking of mobile voice and SMS plans for medium and high usage baskets Australia is significantly less expensive than New Zealand. In particular, for the 300 calls per month basket the lowest price benchmarked for Australia is less than half that benchmarked for New Zealand.

For mobile broadband benchmarked prices in Australia are lower than in New Zealand for every usage basket. For the 200MB basket the price in New Zealand is almost double that in Australia.

## INTRODUCTION

### Purpose and data sources

This report is released under section 9A of the Telecommunications Act 2001 (the Act), which requires the Commission to monitor telecommunications markets and make this information available.

The purpose of the Act is to promote competition in telecommunications markets *for the long-term benefit of end-users in New Zealand*.<sup>2</sup> International benchmarking is an important tool for comparing prices paid for telecommunications services by New Zealand consumers with the prices paid by overseas consumers. Accordingly, retail price benchmarking gives an indication of the competitiveness of New Zealand telecommunications markets relative to other countries.

This report benchmarks New Zealand's retail prices for fixed line and mobile voice and SMS services against those of other OECD countries. The Commission has also compared the prices of fixed and mobile broadband services available in New Zealand to those available in other countries.

In addition, some of the charts included in the 2009 annual report have been updated and are included in Appendix 1. Updated key statistics are also shown in Appendix 1.

The Commission has undertaken retail price benchmarking based on data collected by *Teligen*<sup>3</sup> and data gathered by the Commission itself. Details of the data sources and benchmarking process are described in Appendix 3. Other data used is that made publicly available by the industry.

The OECD benchmarking data was collected by Teligen in August 2010. The OECD benchmarking results have been generated using OECD calculated purchasing power parity (PPP) exchange rates for August 2010<sup>4</sup>. The Commission's own benchmarking used 2010 PPP rates calculated by the International Monetary Fund in April 2010.

### Benchmarking approach

Although price is only one element of competition, retail price comparisons using international benchmarks can provide helpful insights into the competitiveness of markets.

The Commission has benchmarked retail prices for fixed-line and mobile telecommunications services, with a focus on residential<sup>5</sup> and small business customers. Medium to larger businesses usually negotiate a discounted confidential price for a bundle of telecommunications services, making benchmarking for this group more difficult.

Fixed-line and mobile voice<sup>6</sup> benchmarking has been conducted using the OECD consumption baskets. Details of publicly available retail telecommunications plans are used to calculate the

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<sup>2</sup> Section 18 of the Telecommunications Act 2001.

<sup>3</sup> <http://www.teligen.com>

<sup>4</sup> See <http://www.oecd.org/dataoecd/48/18/18598721.pdf>

<sup>5</sup> Businesses run from home, including farms, are often treated as residential customers

<sup>6</sup> Including SMS for mobile.

lowest price to fill each OECD usage basket in each OECD country. The data gathering is performed by Teligen<sup>7</sup> and its T-Basket<sup>8</sup> database is available for purchase on a subscription basis.

For fixed line and mobile broadband the Commission has undertaken indicative retail price benchmarking by creating its own broadband usage baskets. Where possible, these usage baskets have been filled using plans from two of the largest broadband providers in each of the following countries; New Zealand, Australia, UK, Norway and Sweden. As with the voice benchmarking, the lowest price available is selected as the benchmark for each country.<sup>9</sup>

The results of retail price benchmarking of telecommunications services can be affected by a number of factors, including the approach taken for OECD<sup>10</sup> benchmarking, so should be interpreted with caution. A range of factors that can influence the result of retail price benchmarking for telecommunications services are summarised in Appendix 2.

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<sup>7</sup> Telecommunications research specialists: <http://www.teligen.com/>

<sup>8</sup> Benchmarking service: [http://www.teligen.com/t\\_basket.asp](http://www.teligen.com/t_basket.asp)

<sup>9</sup> Details of the providers and plans considered for the benchmarking are shown in Appendix 4.

<sup>10</sup> Organisation for Economic Co-operation and Development:  
[http://www.oecd.org/pages/0,3417,en\\_36734052\\_36734103\\_1\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/pages/0,3417,en_36734052_36734103_1_1_1_1_1,00.html)

## RETAIL FIXED LINE SERVICES - VOICE

### Key observations

#### Retail fixed-line voice services

- Telecom is the only operator with a nationwide fixed-line access network in New Zealand. Although there is some infrastructure-based competition in certain areas of the country, Telecom has the only fixed-line network throughout most of New Zealand.
- Due to relatively high line monthly line rental charged by Telecom, New Zealand's OECD ranking is poor for low levels of usage. New Zealand's ranking improves slightly as the number of calls included in the OECD usage basket increases.
- New Zealand is generally ranked in the bottom third of the OECD for fixed-line voice usage baskets. New Zealand's ranking is: 33 out of 34 for the 20 calls (low usage) basket; 29 out of 34 for the 140 calls (medium usage) basket; 23 out of 34 for the 420 calls (high usage) basket; and 19 out of 33 for the 260 calls business basket.
- For low users, whose use is reflected by the 20 calls basket, New Zealand has the highest monthly line rental of all 34 OECD countries.
- Telecom is required to offer 'free' local calling for all residential customers and is also subject to a price cap that permits it to increase its standard residential line rental by no more than the rate of inflation each year. Due to a lack of infrastructure-based competition in most areas of New Zealand and wholesale prices set at a discount to retail, there is little constraint on Telecom's ability to increase its monthly line rental. Therefore, the standard residential line rental has consistently increased each year in line with the rate of inflation.
- New Zealand has relatively high fixed-to-mobile prices which also contribute to its poor ranking in the OECD benchmarking.

### Introduction

Telecom New Zealand is the only telecommunications retailer with its own nationwide fixed line access network. TelstraClear has an independent access network that covers most of Wellington and Christchurch. TelstraClear has around a 50 per cent market share of the subscribers its network passes<sup>11</sup> which is approximately 5 per cent of total lines in the country. Both Telecom and TelstraClear use their access networks to provide voice and broadband services to residential customers. TelstraClear also delivers television over its cable network.

Amendments to the Telecommunications Act 2001 in 2006 introduced local loop unbundling (and a number of other wholesale access services) enabling Telecom's competitors to lease the unbundled copper local loop (UCLL) from Telecom's access network arm, Chorus. Access to the local copper loop allows access seekers to provide both voice and broadband services to end-users<sup>12</sup>.

<sup>11</sup> <http://cio.co.nz/cio.nsf/str/F51B46F110A0A71CCC2574F1007EF1B5>

<sup>12</sup> As at 30 June 2010 there were 67,000 unbundled lines in New Zealand, the majority (85%) of which were located in the Auckland region (see Appendix 1)

Alternatively Telecom's retail competitors in the fixed-line voice market can - where they do not have their own infrastructure - obtain a resold voice line (Resale Service) from Telecom Wholesale at a small discount to the retail price<sup>13</sup>.

For fixed-line voice services, Telecom's retail pricing varies by geographic region. The price of Telecom's standard residential line rental plan 'Homeline' in August 2010 was \$39.05 per month in the Wellington 04 calling region and Christchurch, \$42.80 per month in Auckland, and \$47.35 per month in the rest of New Zealand. This is summarised in Table 1 below.

**Table 1: Telecom Homeline residential pricing (August 2010)**

Region	Price (including GST)
Wellington and Christchurch	\$39.05
Auckland	\$42.80
Rest of New Zealand	\$47.25

Source: Telecom

The geographic regions in which Telecom offers a reduced the monthly line rental (Auckland, Wellington and Christchurch) are those areas where competing infrastructure has been deployed. As noted above, TelstraClear has a cable network in Wellington and Christchurch, and the majority of local loop unbundling has occurred in Auckland.

## OECD fixed-line voice benchmarking

In order to enable cross-country comparisons of retail prices for fixed-line voice services, the OECD has developed a number of standardised consumption baskets. These baskets each include a certain number of local, national, international and fixed-to-mobile calls, and are based on actual traffic data and consumption data collected from operators and regulators in the OECD member countries.

A high-level summary of the OECD fixed-line usage baskets is included in Table 2 below.

**Table 2: Fixed-line OECD usage baskets**

Calls per month	Total calls	Call distribution			
		Fixed to fixed Local	Fixed to fixed National	Fixed to mobile	International
20 calls basket	20	61%	20%	17%	2%
60 calls basket	60	60%	15%	21%	4%
140 calls basket	140	58%	15%	23%	4%
420 calls basket	420	73%	17%	8%	2%
100 calls business basket	100	48%	19%	30%	3%
260 calls business basket	260	43%	23%	25%	9%

<sup>13</sup> charged by Telecom Retail

For OECD fixed line benchmarking *Teligen* generally collects data from the largest fixed line operator in each OECD country, which is Telecom in New Zealand. Details of publicly available plans are used to calculate the cheapest cost of filling each usage basket in each OECD country.

The ranking for each usage basket is driven by the fixed monthly cost of accessing a fixed telephone line (the monthly line rental), and the variable cost for the different call types included in the basket.

In conducting this benchmarking exercise the Commission has concentrated on the OECD usage baskets which are most likely to suit New Zealand consumption patterns. The Commission has used actual consumption data in order to determine which OECD usage baskets are most relevant in the New Zealand context. The average monthly consumption of fixed line calls in New Zealand for 2008/09 is shown in the table below. Information about the distribution of calls around the average is not made public<sup>14</sup>.

**Table 3: New Zealand fixed-line voice consumption data (2008/09)**

Monthly calls (2008/09)	Average Number	Average Duration (minutes)
Non-chargeable residential local calls	90	3.02
Chargeable local business calls	122	2.57
National calls	31	4.14
Fixed-to-mobile calls	21	1.98
International calls	5	8.16
Total calls including only residential local calls	146	
Total calls including only business local calls	179	

The averages for national, fixed-to-mobile and international calls apply across both residential and business calls. Assuming that the number of national, fixed-to-mobile and international calls made by residential and business consumers is similar, the average number of calls for residential consumers (in total) is 146 per month and the average for business consumers 179 calls per month<sup>15</sup>.

Given that the average number of calls for residential in New Zealand is approximately 146 per month, the 140 calls basket is the OECD usage basket which most closely matches New Zealand consumption patterns.

### Summary of OECD fixed-line voice benchmarking

A summary of New Zealand's performance in OECD benchmarking for fixed-line voice services is included in the table below.

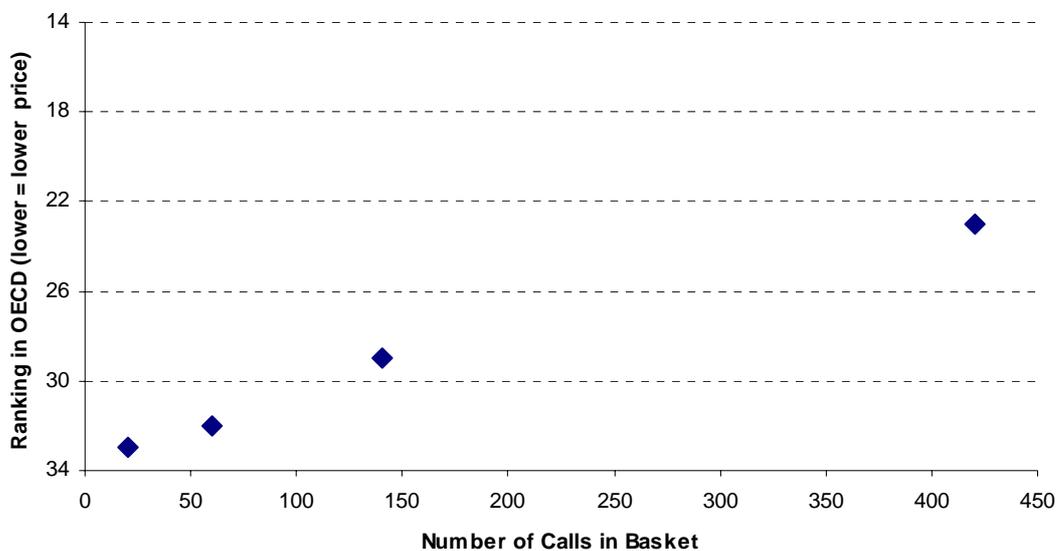
<sup>14</sup> Averages do not show the distribution of calling between low usage and high usage consumers. Therefore it may be possible that a significant proportion of consumers make fewer calls than the average shown. This can be explained by the fact that a minority of consumers is likely to make a disproportionately large number of calls.

<sup>15</sup> Business consumers are likely to make more calls on average than residential consumers but as data is not publicly available the average number of 179 calls has been taken as a proxy.

**Table 4: Summary of OECD fixed-line voice benchmarking**

Basket	OECD ranking	Price
20 calls basket (low usage)	33 out of 34	42% above the OECD average
140 calls basket (medium usage) <sup>16</sup>	29 out of 34	26% above the OECD average
420 calls basket (high usage)	23 out of 34	13% above the OECD average
260 calls business basket (business)	19 out of 33	4% below the OECD average

For the residential usage baskets, New Zealand's ranking improves as the number of calls in the basket increases. This trend is shown in Figure 1 below.

**Figure 1: NZ Ranking by Number of Calls in Basket**

Source: Teligen T-Basket

Due to a relatively high monthly line rental, New Zealand's OECD ranking is poor for low levels of usage. New Zealand's ranking improves slightly as the number of calls included in the OECD usage basket increases (the line rental is spread across a greater number of calls), although it is still in bottom third of the OECD. At high levels of usage the high price of fixed-to-mobile calls becomes more significant in sustaining the relatively poor ranking.

Although the OECD introduced new baskets in March 2010 that the Commission has not reported on previously, the results are consistent with past fixed line benchmarking where New Zealand consistently ranked in the bottom third of OECD countries.

#### Residential fixed-line voice benchmarking results

##### *20 calls basket (low usage)*

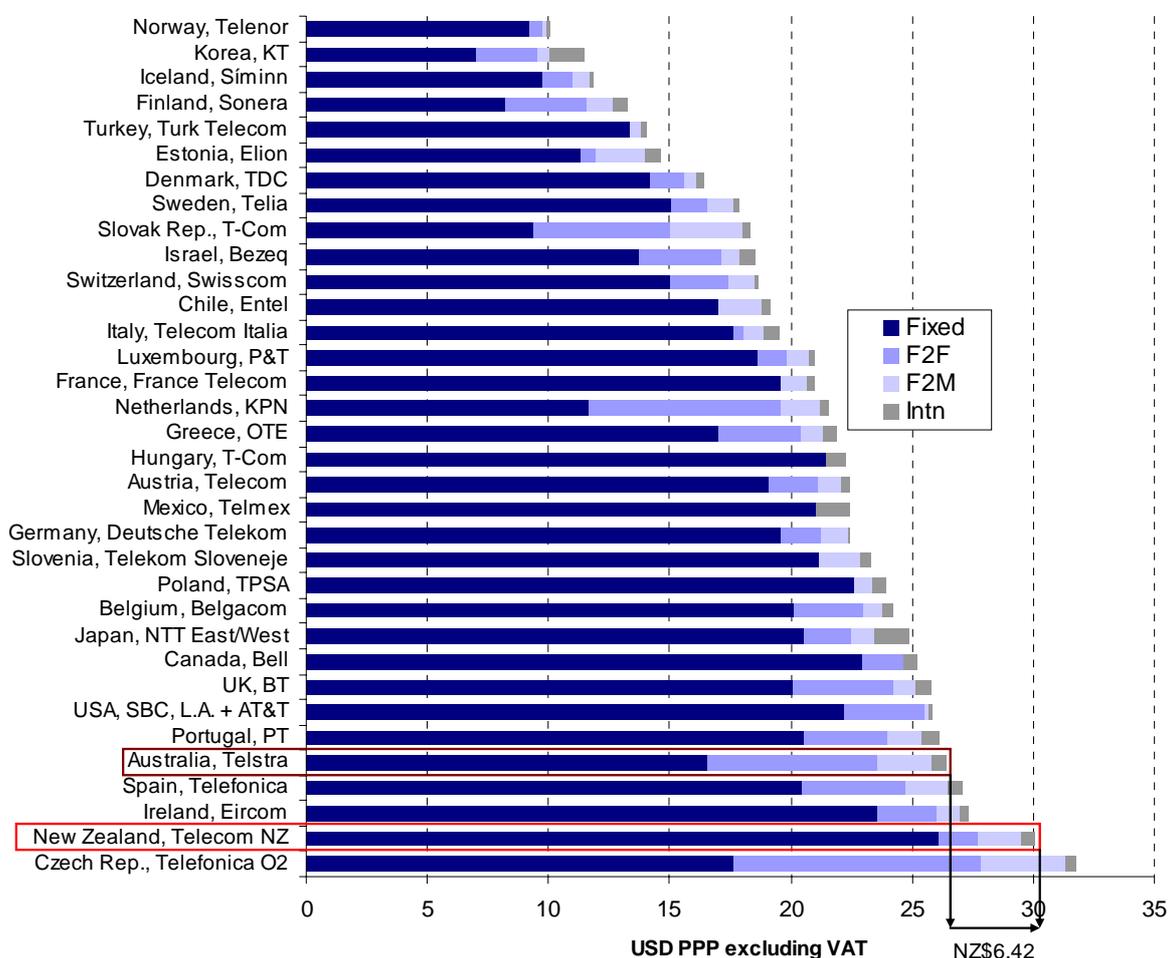
The results for the 20 calls basket show that the price faced by New Zealand consumers for keeping a fixed phone line that is used for only a relatively small number of voice calls is very high

<sup>16</sup> The 140 calls basket most closely matches average consumption in New Zealand.

compared to other OECD countries. For the 20 calls basket, New Zealand is ranked 33 out of 34 OECD countries (as shown Figure 2), with a price 42 per cent above the OECD average. The New Zealand plan used for the 20 calls basket is Telecom *Anytime*<sup>17</sup>.

The high price of filling the 20 calls basket in New Zealand is driven by the high monthly line rental of Telecom's residential plans. As can be seen in Figure 2, New Zealand's fixed monthly price is very nearly the same as Australia's *total* price for the 20 calls basket. At just over US\$26 per month, the New Zealand fixed monthly price is clearly the highest of all 34 OECD countries for the 20 calls basket. This fixed charge is for the *Anytime* plan and comes primarily from the line rental of NZ\$44.65 (including GST) per month. Outside of the three largest cities, *Anytime* is even more expensive at NZ\$50.30 per month. Telecom's default residential plan *Homeline*<sup>18</sup> had a price outside of the three largest cities of \$47.25 per month.

**Figure 2: OECD Fixed Line Voice Results for 20 Calls Basket**



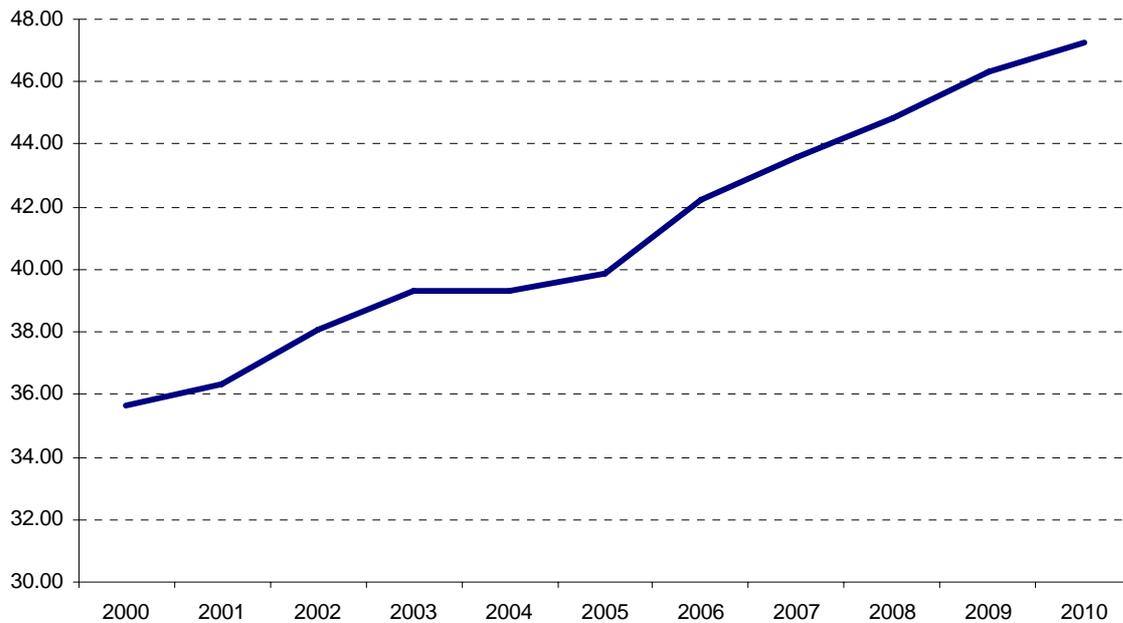
Source: Teligen T-Basket

<sup>17</sup> Telecom *Anytime* is an alternative Telecom residential telephone line plan that has a higher monthly line rental in return for lower priced telephone calls and better price caps.

<sup>18</sup> *Homeline* is the standard Telecom residential telephone line plan (which is subject to the TSO price cap) that requires a monthly line rental be paid and full price paid for chargeable telephone calls. Some call types have price caps but these apply only after calls of a much longer than average duration.

The monthly line rental for Telecom's fixed-line plans has continued to increase each year, while prices for other telecommunications services have generally declined. Telecom's standard residential line rental charge per month since 2000 is illustrated in Figure 3 below.

**Figure 3: Telecom Standard Residential Line Rental Per Month**



Source: Telecom

A key driver of price levels and price structure in the fixed line voice market is the Local Residential Telephone Service Telecommunications Service Obligation (TSO or formerly 'Kiwi Share').

The TSO Deed between Telecom and the Crown is based on three main principles:<sup>19</sup>

- a local free-calling option for local residential telephone service will be maintained for all Telecom residential customers;
- the standard residential rental for local residential telephone service (as it was at 1 November 1989) will not be increased in real terms ('the TSO price cap'); and
- the line rental for local residential telephone service for Telecom residential customers in rural areas will be no higher than the standard residential rental and Telecom will continue to make local residential telephone service as widely available as it is at the commencement date.

<sup>19</sup> TSO Deed for local residential telephone service, December 2001, p 2-3.

The retail price cap is based on the price charged in 1989 and is raised each year by inflation, as measured by the consumer price index (CPI).

The price of delivering telecommunications services (as measured by the PPI for the communications services industry) has generally risen at a significantly slower rate than the CPI because of technological progress and innovation. However, Telecom has generally increased its standard residential line rental each year in accordance with rate of inflation (see Figure 3 above). Due to a lack of infrastructure-based competition in most areas of New Zealand and wholesale voice line pricing set at a discount to Telecom's retail price, there is little other constraint on Telecom's ability to increase its monthly line rental.

The original Kiwi Share agreement was also aimed at protecting the value that many users got from so called "free" local calls. This has been continued with a requirement for all residential local calls to continue to be non-chargeable. Local calls are not free in practice as a component of the monthly line rental covers the cost of 'free' local calling<sup>20</sup>.

Telecom is free to offer an alternative to 'free' local calling for low users of local calls and did so for several years in the early 2000s with its *Homeline Economy* plan, which offered a 35 per cent discount on the standard residential line rental in return for local calls being charged at 20 cents each. Overseas some telecommunications providers offer plans tailored to lower users that have a lower monthly line rental. For example, in OECD benchmarking the BT *Unlimited Weekend* which had a monthly line rental equivalent to NZ\$30.19 (PPP including GST) for free weekend local and national calls was used in the 20 calls basket while the BT *Unlimited Anytime* which had a monthly line rental equivalent to NZ\$41.97 for free local and national calls all the time was used in the 140 calls basket.

Having no alternative to a plan with a relatively high fixed price for unlimited local calls favours those consumers who make a lot of local calls and disadvantages those who make few. Consumers making only few monthly calls effectively cross subsidise consumers with a high number of calls. The free local calling requirement together with the retail price cap have contributed to the situation where the line rental for a low user in New Zealand is now the highest in the OECD and the total monthly cost is the second highest in the OECD.

Despite local calls being non-chargeable for residential consumers, there was a 12 per cent fall in non-chargeable local calling from 5.31 billion minutes in 2007/08 to 4.67 billion minutes in 2008/09. No survey data is available for earlier years but it was estimated that residential local calling was around 11 billion minutes per year in 2001.<sup>21</sup> In addition, Telecom stated in August 2000 that it was providing a further 12 billion minutes a year in dial-up internet calls.<sup>21</sup>

#### *140 calls basket (medium usage)*

<sup>20</sup> This can be illustrated by the *Homeline Economy* plan which Telecom offered until around 2004. It had a 35 per cent discount on the standard residential line rental in return for local calls being charged at 20 cents each. This would be a local calling component of around \$17 a month if applied to the current standard Homeline rental.

<sup>21</sup>

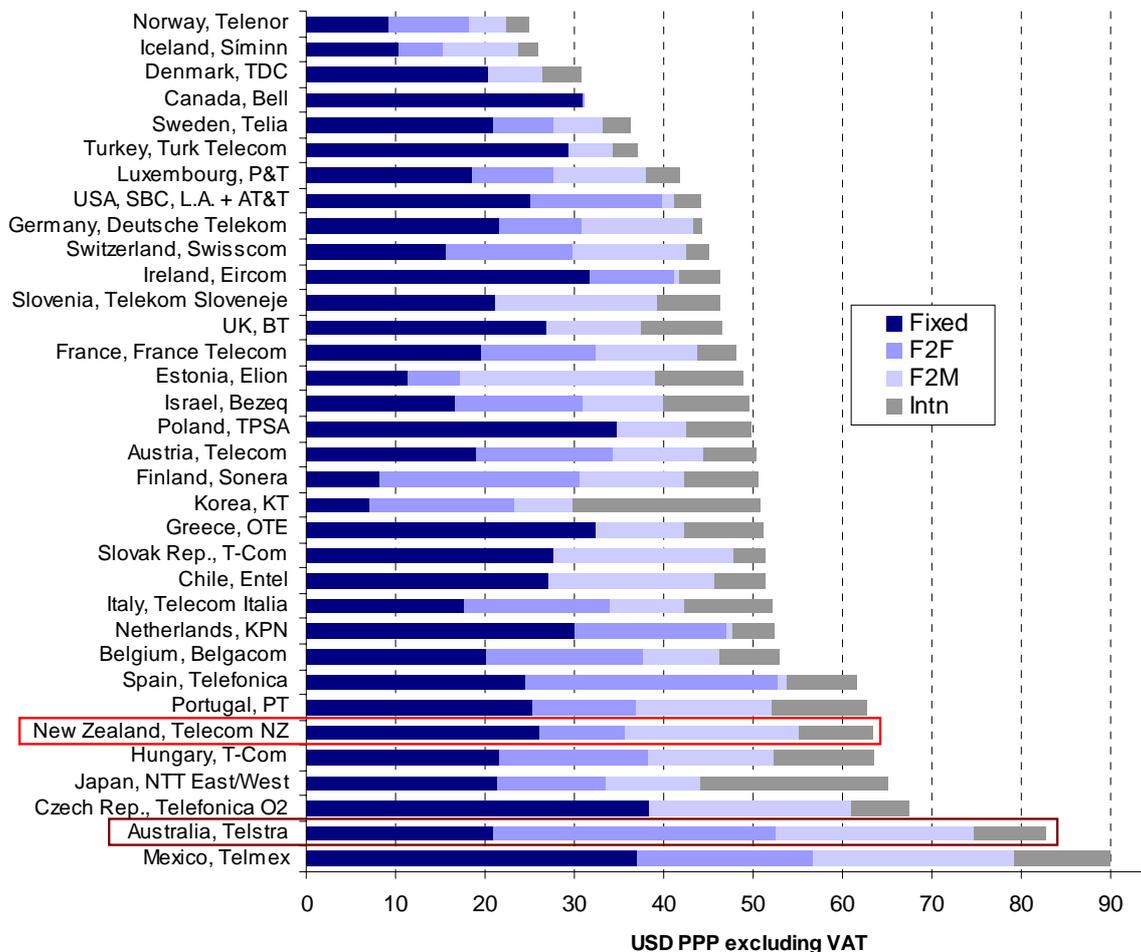
[http://www.med.govt.nz/templates/MultipageDocumentPage\\_4851.aspx?&MSHiC=65001&L=0&W=free+local+ca ll+&Pre=%3cb%3e&Post=%3c%2fb%3e](http://www.med.govt.nz/templates/MultipageDocumentPage_4851.aspx?&MSHiC=65001&L=0&W=free+local+ca ll+&Pre=%3cb%3e&Post=%3c%2fb%3e) paragraph 37

The estimate of New Zealand household/residential average consumption using available data is 146 calls a month, as was explained earlier. This is most closely represented by the OECD’s 140 calls basket, which includes a calling profile of 81 local calls, 32 fixed-to-mobile calls, 21 national calls and 6 international calls.

As can be seen in Figure 4, under the 140 calls basket New Zealand’s position improves slightly to 29 out of 34 OECD countries, with a price 26 per cent above the OECD average. At this level of usage, Telecom’s Anytime plan no longer has the highest fixed monthly price of the plans selected. A moderately high fixed monthly price, together with one of the highest prices for fixed-to-mobile calls, is largely what pushes New Zealand to 29<sup>th</sup> place with a price of NZ\$110.94 per month.

Selecting Telecom’s default *Homeline* plan (Auckland price) for the 140 calls basket would put New Zealand into 32<sup>nd</sup> place, with a price 58 per cent above the OECD average (at NZ\$139.78). This is due to the Homeline plan’s higher calling prices, particularly for fixed-to-mobile calls.

**Figure 4: OECD Fixed Line Voice Results for 140 Calls Basket**



Source: Teligen T-Basket

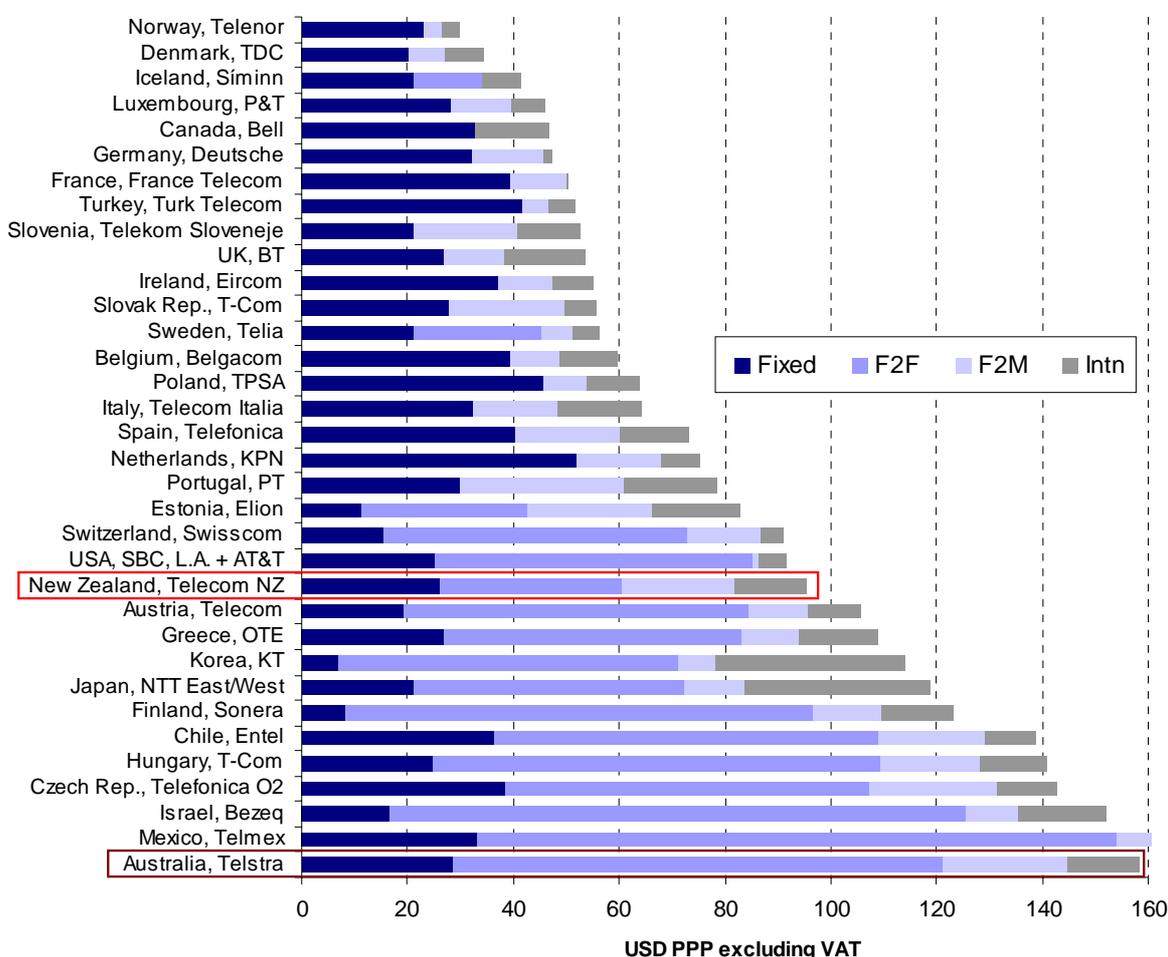
420 calls basket (high usage)

Even at the high usage levels of the 420 calls basket, New Zealand does not rate particularly well. As shown in Figure 5, New Zealand ranks 23 out of 34 in the OECD with a price 13 per cent above the OECD average (at a price of NZ\$166.71 per month). The cost of fixed-to-mobile calls is a significant component of the total cost.

Some of the other countries have plans which include unlimited national calls in return for a higher monthly fixed charge. The variable cost of national calls, where applicable, is shown in medium blue as “F2F” in the relevant bar lines.

Telecom offers an unlimited national calling option only via one of its phone and broadband bundles (Total Home), although other providers of retail fixed line voice services in New Zealand do offer unlimited national calls for a fixed monthly fee.

**Figure 5: OECD Fixed Line Voice Results for 420 Calls Basket**



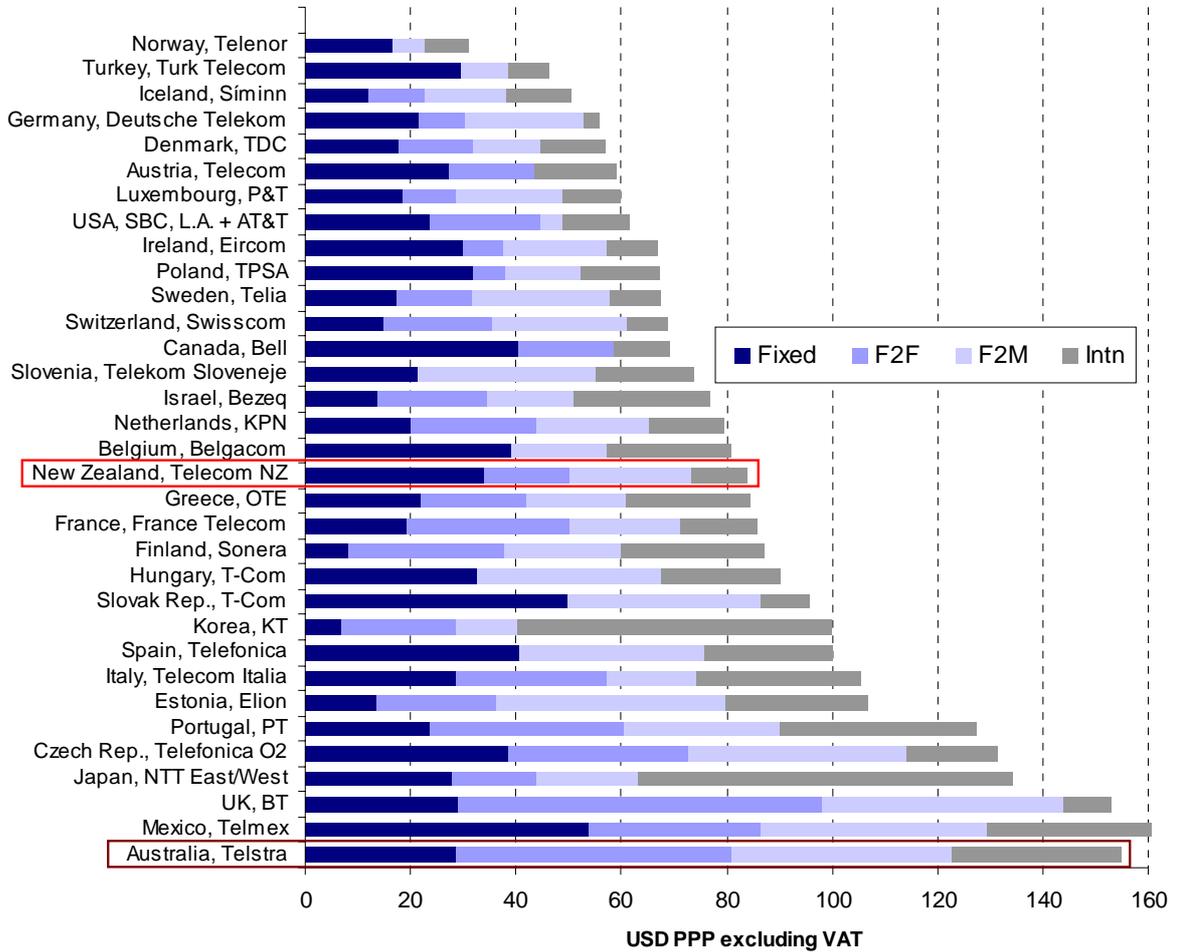
Source: Teligen T-Basket

### Business fixed-line voice benchmarking results

New Zealand performs better in the 260 calls business basket (probably moderately high usage for a small business) where it ranks 19<sup>th</sup> out of 33 OECD countries. The plan selected for New Zealand,

Telecom BusinessTime, has a price four per cent below the OECD average. The results can be seen in Figure 6<sup>22</sup>.

**Figure 6: OECD Fixed Line Voice Results for 260 Calls Business Basket**



Source: Teligen T-Basket

<sup>22</sup> Discount of US\$7.72 not shown for Mexico.

## RETAIL FIXED LINE SERVICES - BROADBAND

### Key observations

#### Retail fixed-line broadband services

- In New Zealand, broadband services tend to be differentiated based on data caps rather than speed. All of Telecom's retail broadband plans are full speed upstream and downstream, with data caps ranging from 3GB per month to 40GB per month. However, some of Telecom's competitors differentiate their services by offering broadband plans which provide lower speeds for a lower price.
- For low and medium levels of usage (2GB and 10GB per month), the pricing of New Zealand broadband plans is broadly in line with that observed in the four other countries benchmarked. New Zealand's ranking is 3 out of 5 for the low usage basket and 2 out of 5 for the medium usage basket.
- However, for high levels of usage (40GB+), New Zealand's broadband pricing is significantly higher than observed in other countries (with a ranking of 5 out of 5). This may be driven by the cost of international bandwidth resulting from New Zealand's isolated geographic location. However, Australia, which faces similar issues, has prices which are significantly lower than New Zealand for the high usage basket.

### Introduction

Fixed line broadband in New Zealand is largely delivered over the same access network as fixed line voice. Telecom's nationwide network uses xDSL technology to deliver broadband over copper lines to residential customers, while TelstraClear's uses co-axial cable to deliver cable broadband to residential customers in Wellington, Kapiti and Christchurch.

TelstraClear and other fixed line retailers including Slingshot, Vodafone, Orcon, WorldxChange and Compass offer DSL broadband services using wholesale access to Telecom's network in areas where they do not have their own infrastructure. Broadband can be obtained as a bitstream service from Telecom Wholesale at price based on a discounted retail price.

As noted earlier, an alternative is for a retailer to lease the unbundled copper local loop from Chorus, which enables both voice and broadband services to be delivered to retail customers.

### Fixed-line broadband benchmarking

The Commission has benchmarked New Zealand's fixed-line broadband prices against those in four other countries: Australia, the UK, Norway and Sweden. The basic methodology used by the Commission in its broadband benchmarking and the challenges associated with benchmarking broadband prices are described in Appendix 2.

The fixed line broadband usage baskets that have been used are based on those used in the Commission's last broadband benchmarking exercise, conducted a little over a year ago. However, with average broadband speeds and data usage continuing to rise, the Commission has adjusted the

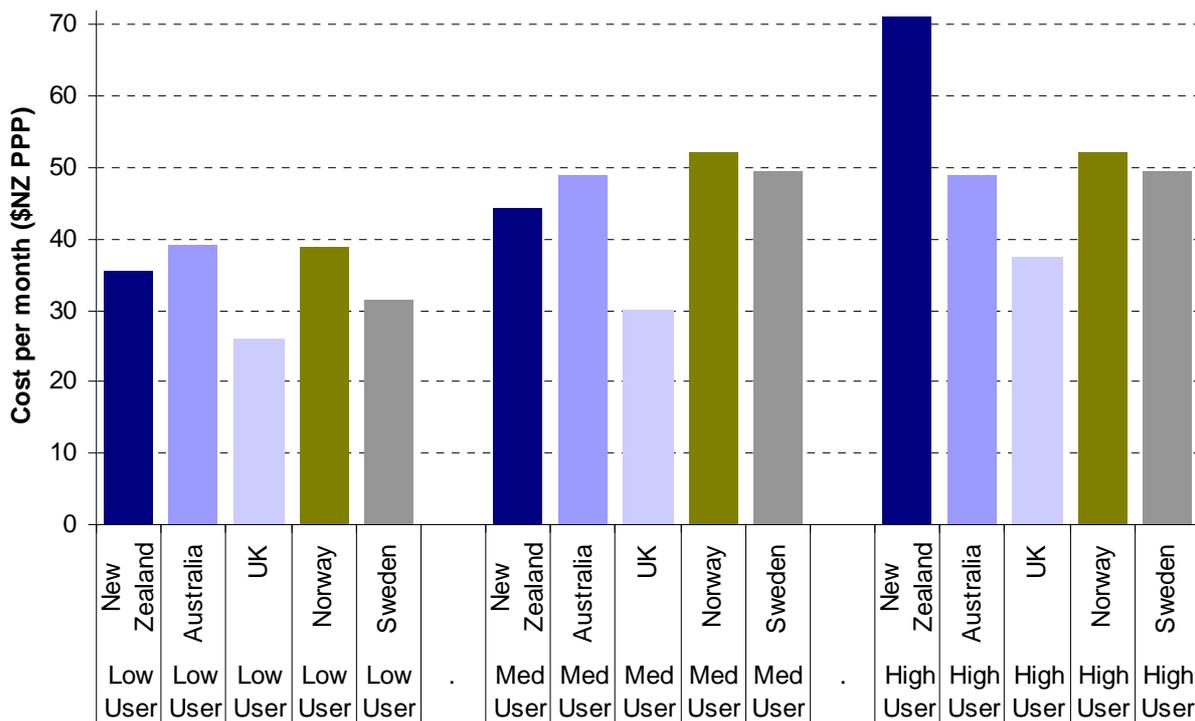
baskets by doubling the data usage (for all baskets) and raising the speed of the medium user basket to the equivalent of ADSL1 full speed. The new baskets are shown in Table 5 below.

**Table 5: Fixed-line broadband usage baskets**

User Type	Usage Basket	Minimum Downstream Speed <sup>23</sup>
Low User	2GB of data per month	256Kbps
Medium User	10GB of data per month	8Mbps
High User	40GB of data per month	8Mbps

The benchmarking results shown in Figure 7 indicate that New Zealand broadband prices are within the range of the other countries benchmarked for the low user and medium user baskets. New Zealand is ranked 3 out of 5 for the low user basket, and 2 out of 5 for the medium user basket. However, New Zealand broadband prices are significantly higher than other countries for the high user basket, where New Zealand ranked 5 out of 5.

**Figure 7: Fixed Line Broadband Benchmarking Results<sup>24</sup>**



Source: Commerce Commission

<sup>23</sup> Compliance with the downstream speed requirement is assessed based on the maximum speeds listed for each plan. Actual speeds may differ from speeds listed for a number of reasons, such as customer premises wiring and distance from the local telephone exchange.

<sup>24</sup> The speed requirement for the medium user basket ruled out some plans in Norway and Sweden that had a speed in the 2 to 6 Mbps range. In practice, such plans may well give speeds as high full speed ADSL1 broadband plans from other countries which are included in the medium user basket.

As discussed in the 2009 annual monitoring report, Telecom's retail residential broadband plans are all full speed services delivered using either ADSL2+ or ADSL1 technology. Telecom's retail competitors, on the other hand, often differentiate their services by selling broadband plans that offer lower speeds for a lower price.

Telecom's broadband pricing is based only on the amount of data included with the plan. All of Telecom's retail broadband plans are full speed upstream and downstream, and are optimised for ADSL2+. The data caps available on Telecom's standard residential plans range from 3GB per month to 40GB per month.

The Commission notes that since the benchmarking was performed TelstraClear introduced a 15Mbps cable plan with 40GB of data for \$69.95 (\$60.98 excluding GST). This price of this plan is \$10 less than the Telecom Pro plan used as the high user benchmark for New Zealand.

Although the Commission is cautious about drawing definitive conclusions from this limited fixed line broadband benchmarking exercise, it does appear that the price of broadband in New Zealand for low and medium users is in line with that observed in other countries. High users, however, face a significantly higher price in New Zealand compared to a small selection of other similarly developed countries.

#### *Data Caps*

Other retailers similarly charge more for extra data in addition to charging more for higher speeds. The use of data caps in the New Zealand market appears partly to be driven by the cost of international bandwidth due to New Zealand's isolated geographic location. Other countries where the cost of international bandwidth is material, such as Australia, also tend to employ data caps. However, even in countries where the cost of international bandwidth is less significant, data caps are sometimes used to discourage excessive usage by individual subscribers.

None of the plans benchmarked from Norway and Sweden had data caps and one plan from the UK had no data cap. Furthermore, the medium user plans from Australia had data caps of 50GB so were effectively high user plans (according to the baskets used by the Commission). Some of the second tier operators in Australia have recently introduced effectively unlimited data plans, offering a cap of 1TB (1,000GB). The least expensive of these is offered by TPG which provides a total of 500GB for each of its on- and off-peak periods for a total of A\$69.99 (\$NZ75.42) per month.<sup>25</sup>

#### *Cost for international bandwidth*

New Zealand's higher costs for international bandwidth are often used to justify higher broadband prices in New Zealand. However, given that Australia has similar international bandwidth costs, this does not explain why the New Zealand high user price is significantly higher than that of Australia.

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<sup>25</sup> <http://www.zdnet.com.au/tpg-joins-the-1tb-plan-bandwagon-339305389.htm>

## RETAIL MOBILE SERVICES – VOICE AND SMS

### Key observations

#### Retail mobile voice and SMS services

- There are three mobile network operators in New Zealand: Vodafone, Telecom and the new entrant 2degrees. Vodafone and Telecom both operate nationwide networks. 2degrees has its own network deployed in Auckland, Wellington, Christchurch and Queenstown, and relies on a national roaming agreement with Vodafone outside of these areas.
- The entry of 2degrees in the mobile market has had a significant impact in terms of consumer choice and competitive offerings. When comparing prepay plans available, 2degrees' pricing is significantly lower than that offered by Vodafone and Telecom.
- Mobile voice usage is low in New Zealand relative to other countries, with consumers making an average of approximately 25 calls per month.
- For the 30 calls (low usage) basket New Zealand performs relatively well, with a ranking of 9 out of 34 OECD countries. However, for higher levels of usage New Zealand's ranking is significantly worse, at 20 out of 34 for the 100 calls (medium usage) basket and 25 out of 34 for the 300 calls (high usage) basket.
- Average SMS usage is high in New Zealand. The Commission estimates that the average number of text messages per subscriber is 240 per month. New Zealand's pricing for text messaging is relatively low compared to other OECD countries, with a ranking of 14 out of 34 for the 400 messages basket.
- Notably, Vodafone prepay plans offer low priced add-ons for *on-net* calls and texts only. Telecom and 2degrees, on the other hand, offer any network texting bundles.

### Introduction

Since August 2009 there have been three mobile networks operating in New Zealand: Telecom, Vodafone and 2degrees. These operators are also the only significant retailers, with the possible exception of TelstraClear which has an MVNO agreement with Vodafone<sup>26</sup>. There are several other small retailers operating under MVNO agreements, none of which yet has a significant number of customers.

Vodafone and Telecom both operate nationwide mobile networks. At present, 2degrees has its own cell sites in Auckland, Wellington, Christchurch and Queenstown, and relies on a national roaming agreement with Vodafone outside of these areas.

All three mobile providers in New Zealand operate a 3G network which allows mobile broadband to be provided in addition to voice and text messages. Vodafone and 2degrees also operate 2G GSM networks in parallel with their 3G networks.

<sup>26</sup> TelstraClear also has some mobile customers from an earlier MVNO agreement with Telecom.

Around two thirds of mobile subscribers in New Zealand use prepay plans. This puts New Zealanders among the higher users of prepay plans in the OECD. In 2007, the percentage of prepay subscribers in OECD countries ranged from 2 per cent to 92 per cent, with an average of 44 per cent.

## OECD mobile voice and SMS benchmarking

The OECD has developed consumption baskets to enable cross-country comparisons of retail mobile voice and SMS prices. A summary of the OECD mobile baskets is included below.

**Table 6: OECD mobile usage baskets**

Volume per month	Total calls per month	Call distribution				SMS
		Mobile to fixed	On-net	Off-net	Voicemail	
30 calls basket	30	16%	55%	25%	4%	100
100 calls basket	100	17%	52%	28%	3%	140
300 calls basket	300	14%	46%	37%	3%	225
900 calls basket	900	14%	55%	28%	3%	350
40 calls prepaid basket	40	14%	64%	18%	4%	60
400 messages basket	8	8%	55%	25%	12%	400

For mobile benchmarking, Teligen generally includes plans from the two largest mobile operators in each OECD country. The two mobile network operators benchmarked by *Teligen* in New Zealand are Vodafone and Telecom. Other operators are able to be added with a user specified tariff feature. The Commission has used only the standard operators to calculate an initial ranking and then added 2degrees for a separate comparison of prepay plans for most baskets<sup>27</sup>.

The benchmarking was performed in August 2010 before 2degrees launched its first postpay plan and when GST was still at 12.5 per cent. The Commission notes that Vodafone has made some changes to its plans since August and Telecom has launched some special offers.

As with the fixed-line voice benchmarking, the Commission has concentrated its analysis on the OECD usage baskets that are most likely to reflect New Zealand consumption patterns. Some indications of New Zealand mobile consumption patterns were given in the 2009 annual report. Mobile voice usage was shown to be among the lowest in the world, averaging approximately 75 minutes per month per subscriber. Assuming an average call duration of three minutes, the average New Zealand consumer would make approximately 25 calls per month. Average text usage was stated to be approximately eight per day, which would be 240 per month.

### Summary of OECD mobile voice and SMS benchmarking

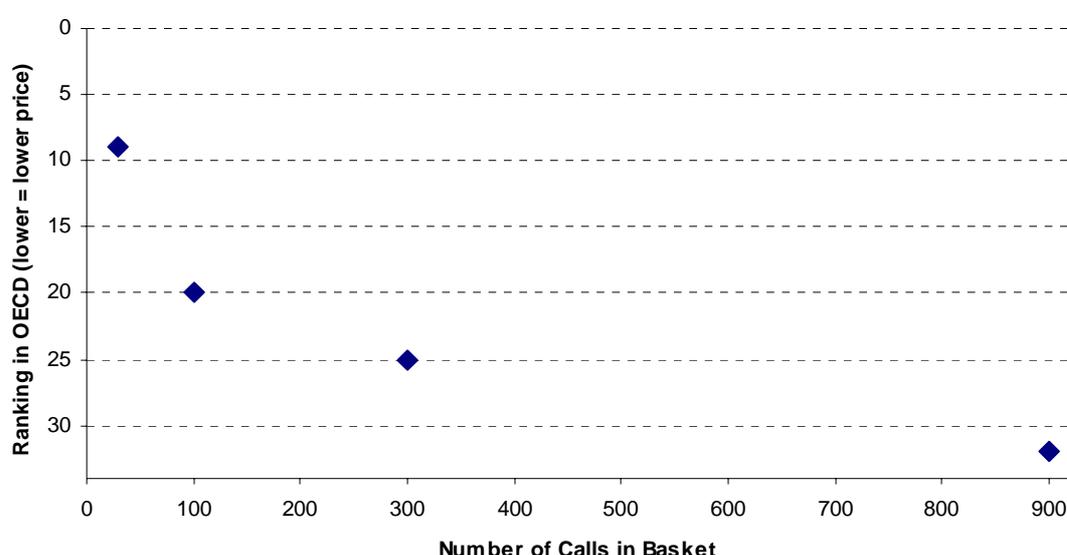
A summary of New Zealand's performance in OECD benchmarking for mobile voice and SMS services is included in the table below.

<sup>27</sup> This comparison is made in \$NZ PPP and prices quoted include GST.

**Table 7: Summary of OECD mobile voice and SMS benchmarking**

Basket	OECD ranking	Price
30 calls basket (low usage)	9 out of 34	25% below the OECD average
100 calls basket (medium usage)	20 out of 34	9% above the OECD average
300 calls basket (high usage)	25 out of 34	22% above the OECD average
400 messages basket	14 out of 34	35% below the OECD average

The results of the 900 calls basket have been added to complete the graphical summary of the results in Figure 8 below. This shows how New Zealand's OECD mobile benchmarking ranking quickly worsens as the number of minutes included in the consumption basket increases.

**Figure 8: NZ Ranking by Number of Calls in Basket**

Source: Teligen T-Basket

The baskets used are new baskets introduced by the OECD in March 2010 that the Commission has not reported on previously. New Zealand had performed reasonably well in recent years, ranking the top half of OECD countries using the old low, medium and high user baskets. Vodafone's three postpay "Base" plans were the cheapest available in New Zealand for each of the old OECD usage baskets. These plans were later renamed "Easy" plans. New Zealand performed poorly in OECD benchmarking of prepay plans apart from when 2degrees was taken into account once it entered the market.

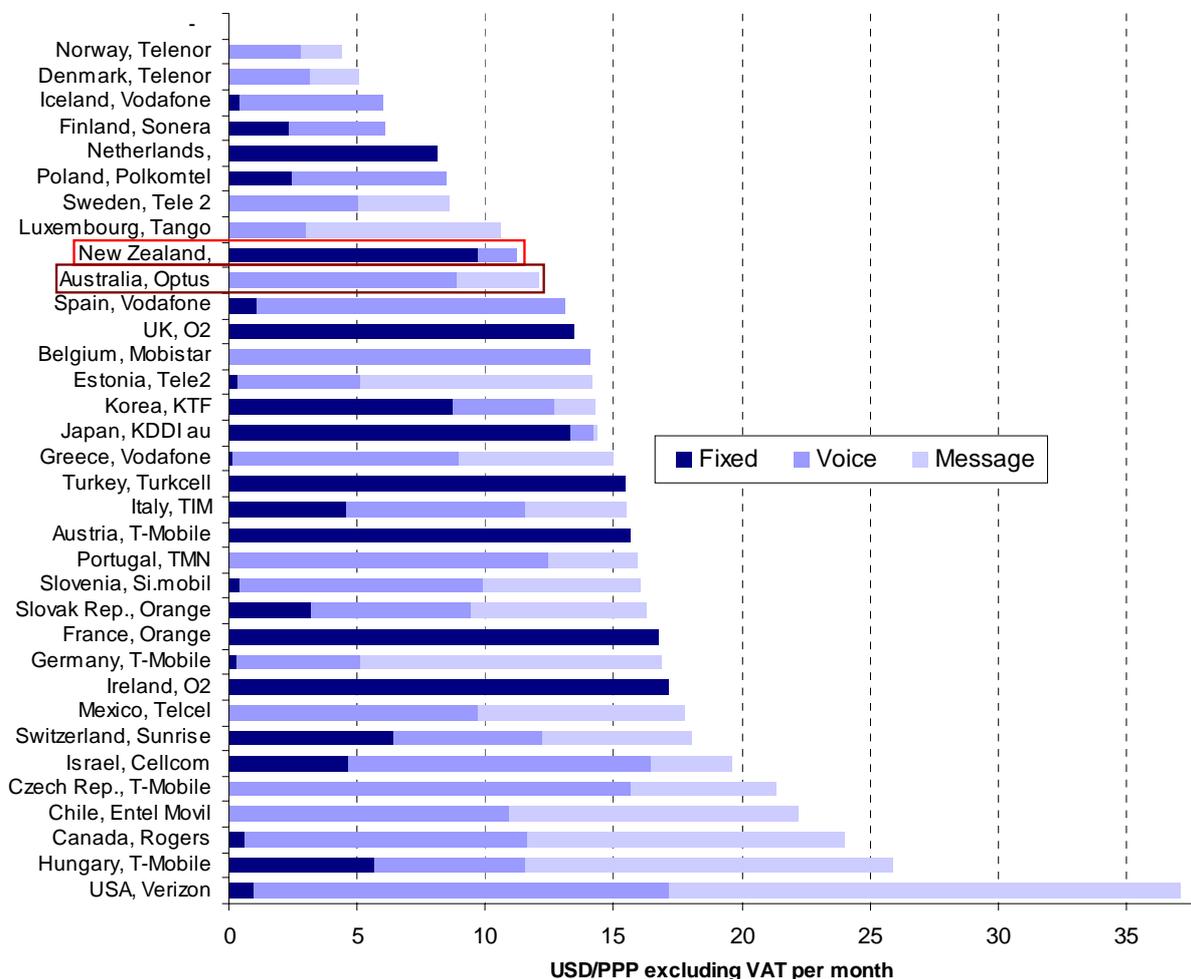
### *30 calls basket (low usage)*

The results for the 30 calls basket in Figure 9 shows the price for a mobile plan that is used for a relatively small number of calls and a reasonable number of texts (100) by European standards. However, the average number of mobile calls per month in New Zealand is around 30 per month and the average number of texts sent per month is more than double the 100 included in this basket.

New Zealand performs relatively well in the 30 calls basket with Vodafone's Easy 20 plan giving a ranking of 9 out of 34 OECD countries, with a price 25 per cent below the OECD average. Its total

price is \$19.59 per month in \$NZ (including GST). Telecom's best post-pay plan is Talk & Text 300 + 1 Favourite which has a total price of \$30.19.

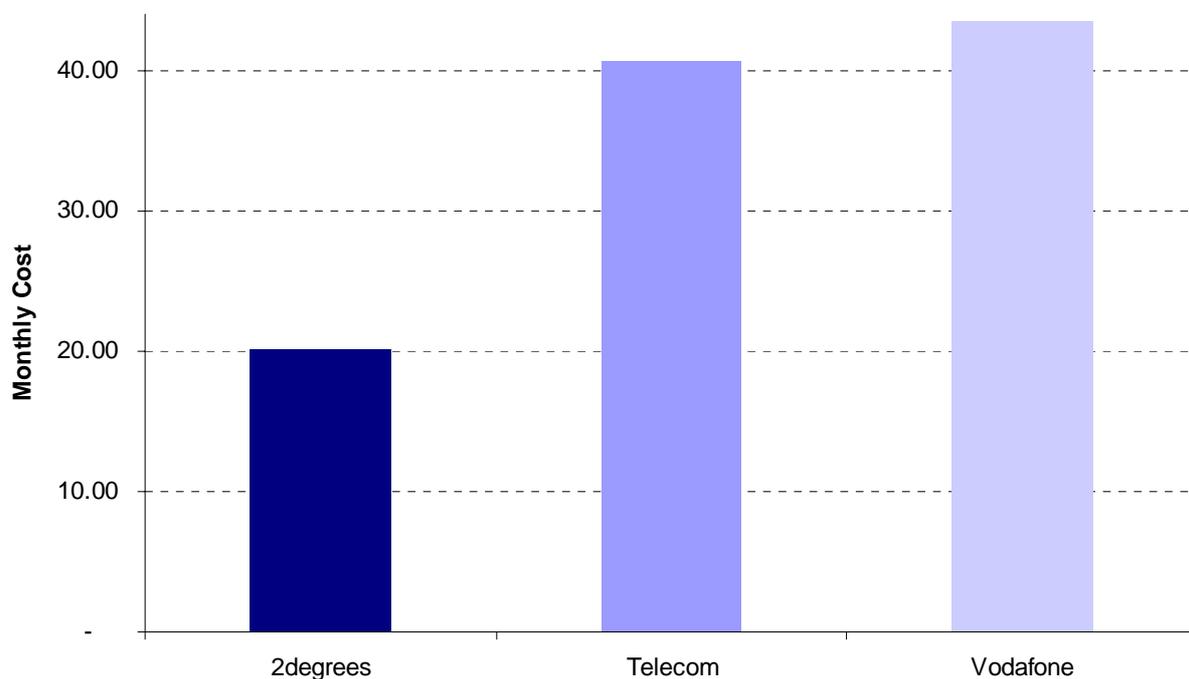
**Figure 9: OECD Mobile Voice and SMS Voice Results for 30 Calls Basket**



Source: Teligen T-Basket

As noted earlier, a comparison of New Zealand prepay plans is also presented for most baskets. New Zealand prepay results for the 30 calls basket are shown in \$NZ (including GST) in Figure 10. Vodafone has the highest price for its best prepay plan, Simply Prepay, at \$43.48, a little above Telecom's OneRate Prepaid + txt 150 at \$40.62 (assuming \$20 top-ups). 2degrees has a price of \$20.14 per month<sup>28</sup>, which is less than half the price of the Vodafone and Telecom prepay plans and only marginally higher than the cost of Vodafone's postpay plan.

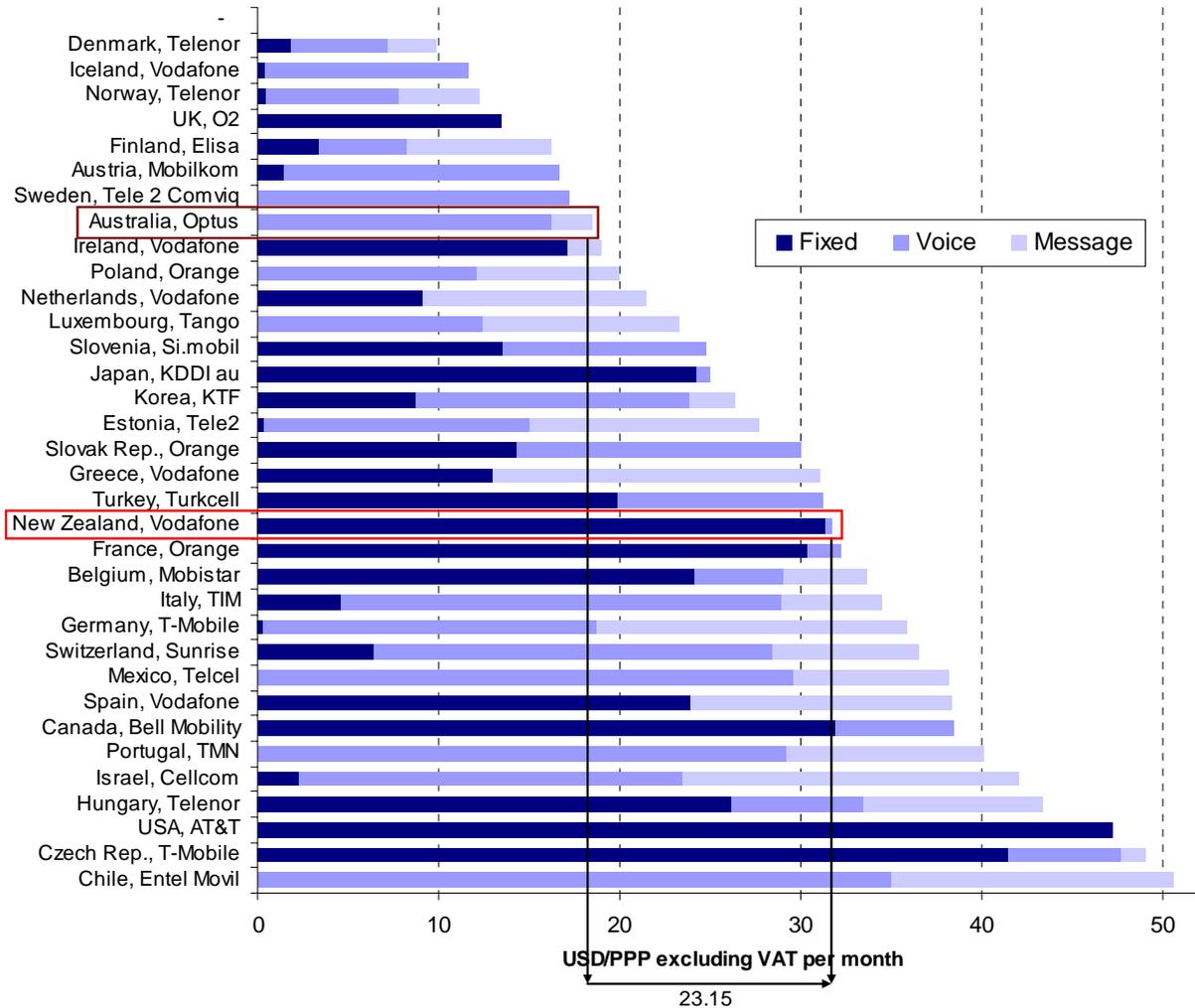
<sup>28</sup> Standard prepay plan including the benefits of magic top-up gained when spending \$20 per month which is the minimum top-up.

**Figure 10: New Zealand Prepay Results for 30 Calls Basket**

Source: Teligen T-Basket, Commerce Commission

*100 calls basket (medium usage)*

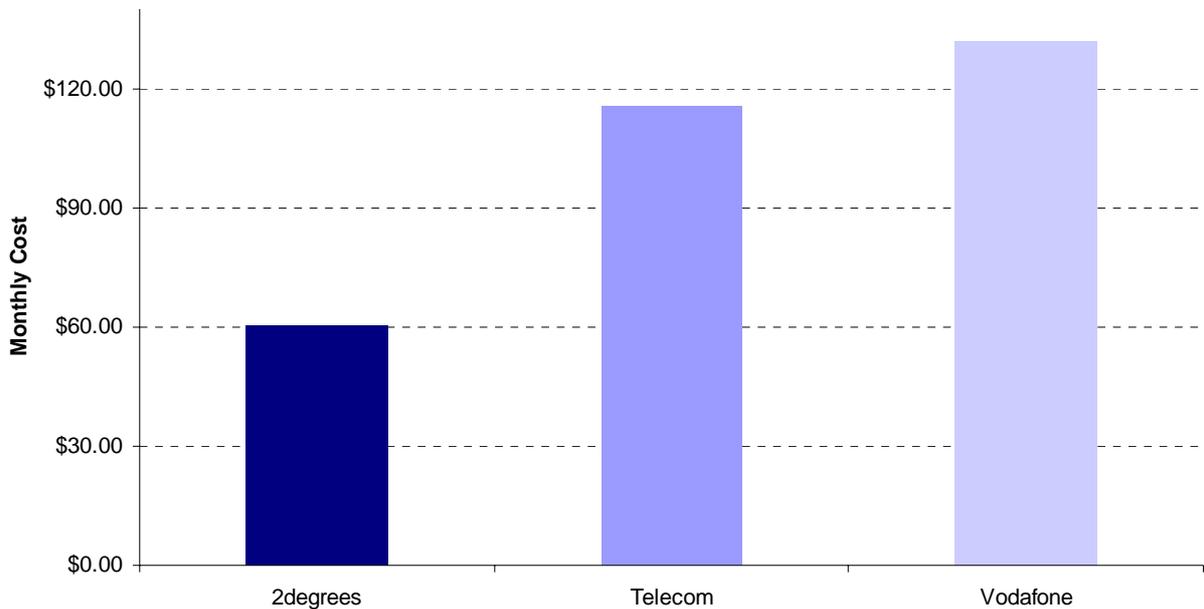
The 100 calls basket includes 100 calls and 140 texts per month. The cheapest plan selected for New Zealand for this basket is Vodafone's Txter 90 + Your Time 100 plan, at a price of NZ\$55.50 per month. As shown in Figure 11, New Zealand's ranking is 20 out of 34 in the OECD for this basket, with a price 9 per cent above the average. The price of Telecom's cheapest plan for this basket (Talk and Text 300 + 3 Favourites) is \$57.95.

**Figure 11: OECD Mobile Voice and SMS Voice Results for 100 Calls Basket**

Source: Teligen T-Basket

The New Zealand prepay results for the 100 calls basket are shown in Figure 12. The 2degrees plan with a \$30 Everyone 100 Talk Pack has a price of \$60.54, which is only a little more than the postpay plans discussed above (and around half the price of the Telecom and Vodafone prepay plans). If a \$40 top-up is assumed for Telecom, its OneRate Prepaid + 3 Favourites plan has a price of \$115.60 per month, and Vodafone's Simply Prepay plan has a price of \$131.79.

The price of the Telecom plan could be further reduced by combining 3 Favourites with Txt 150. However, due to the large number of possible combinations of add-ons and options that can be taken with mobile plans, Teligen does not benchmark every conceivable plan combination. Vodafone in particular offers a wide array of plans and add-ons. Teligen listed 197 possible different plan and add-on combinations for Vodafone New Zealand for its August 2010 benchmarking.

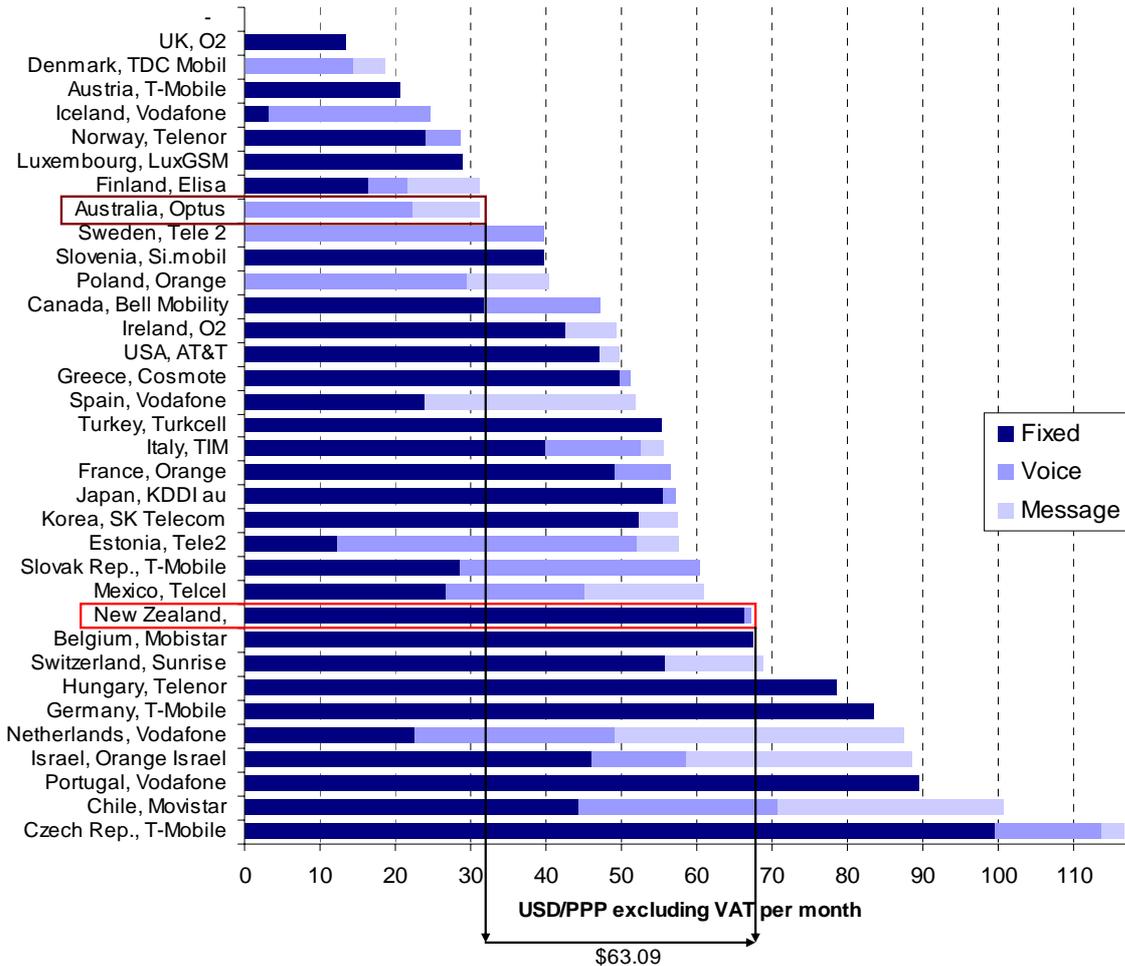
**Figure 12: New Zealand Prepay Results for 100 Calls Basket**

Source: Teligen T-Basket, Commerce Commission

### *300 calls basket (high usage)*

The 300 calls basket represents heavy use of mobile voice, at least by New Zealand standards. The basket also has 225 texts per month. As shown in Figure 13, New Zealand ranks 25 out of 34 for this basket at 22 per cent above the OECD average. Vodafone's Txter 375 + 3 Bestmates plan is selected as the cheapest for New Zealand. This plan is no longer appears to be listed on the Vodafone website although similar plans are available. It has a price of compared of \$117.75, compared to \$148.29 for Telecom's cheapest plan for this basket (the Talk and Text 300 + 3 Favourites plan). Prepay plans have not been compared for this basket because it is unlikely consumers would use them to make such a high volume of calls on a regular basis.

**Figure 13: OECD Mobile Voice and SMS Voice Results for 300 Calls Basket**

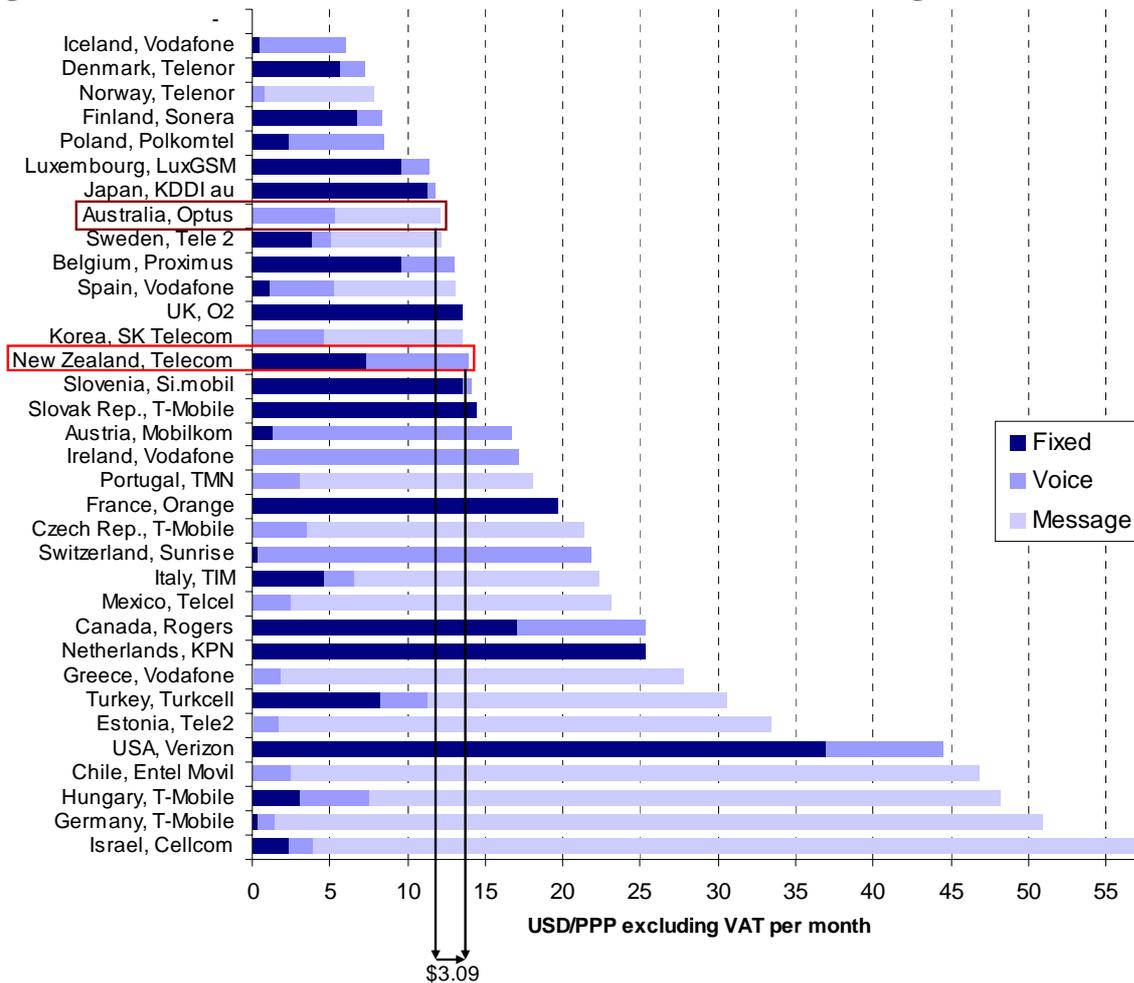


Source: Teligen T-Basket

*400 messages basket*

The OECD now has a basket to represent those consumers who predominantly use their phone for text messaging. The ‘400 messages’ basket includes 400 texts and just 8 voice calls. Many teenage mobile phone users are likely to more closely fit this basket than any of the other OECD usage baskets.

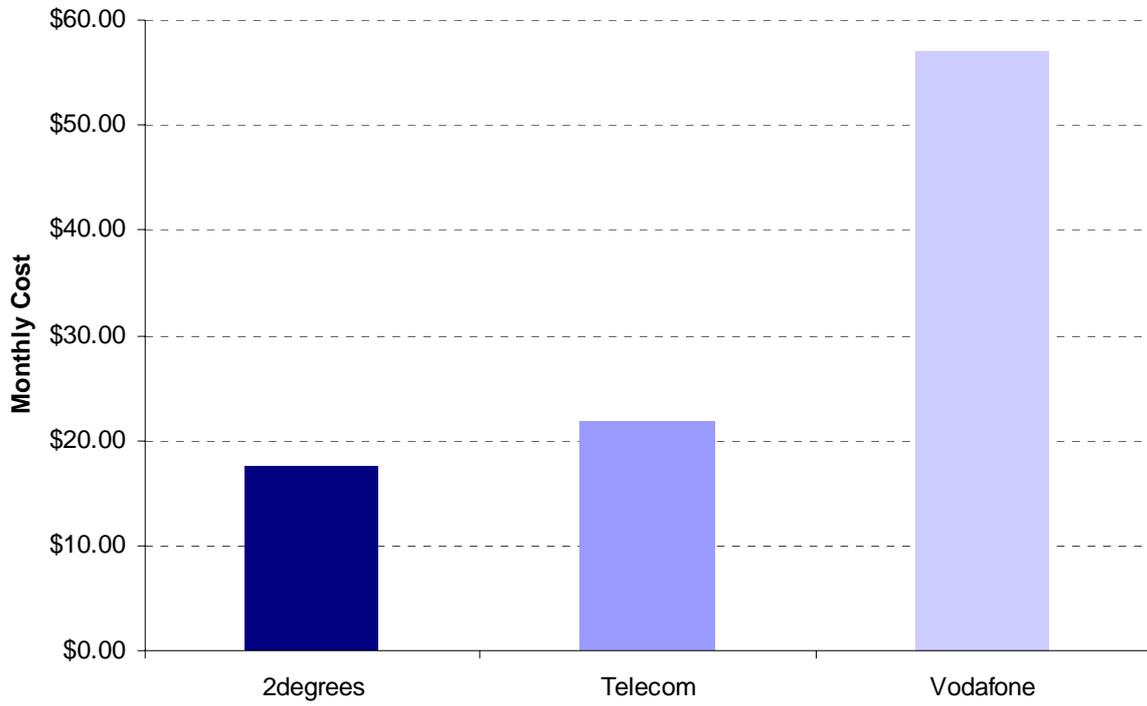
As shown in Figure 14, New Zealand ranks 14 out of 34 (at around two thirds of the OECD average) with Telecom’s OneRate Prepaid + Txt 600 plan. This plan has a price of \$24.29 per month, although if topped-up \$20 at a time the price drops to \$21.78. Vodafone’s cheapest plan is its Postpaid Starter 600 plan at \$30.14. Telecom’s cheapest postpay plan is OneRate 50 +Txt 600 which has a price of \$41.95 per month.

**Figure 14: OECD Mobile Voice and SMS Voice Results for 400 Messages Basket**

Source: Teligen T-Basket

Figure 15 shows New Zealand prepay results for the 400 messages basket. The 2degrees plan with a \$10 Text Pack has a price of \$17.55 per month and is cheaper than any of the plans offered by Telecom and Vodafone. Telecom's prepay result was reported above since it was cheaper than its best postpay plan so set the OECD benchmark for New Zealand. Vodafone's best prepay plan, Simply Prepay, is, on the other hand, nearly twice as expensive as its best postpay plan at \$57.12.

The high price of the best Vodafone prepay plan is driven by the fact that Vodafone's prepay text add-ons are on-net offers that are only able to be used for texting other Vodafone subscribers. Telecom and 2degrees, on the other hand, offer any network texting bundles. For example, Telecom offers a 'Text Anyone 2500' add-on which provides 2,500 text messages to any mobile network for \$12 per month. Similarly, 2degrees offers 1,000 texts messages to any mobile network for \$10 per month (the 2degrees '\$10 Text Pack').

**Figure 15: New Zealand Prepay Results for 400 Messages Basket**

Source: Teligen T-Basket, Commerce Commission

## RETAIL MOBILE SERVICES – BROADBAND

### Key observations

#### Mobile data card services

- Mobile broadband is an emerging market in New Zealand, and mobile data prices are currently relatively expensive compared to other countries, particularly for high data usage. New Zealand ranked 5<sup>th</sup> out of the 5 countries included in the benchmarking set for both the 2GB and 8GB usage baskets. For the 8GB basket, New Zealand's benchmarked price is nearly three times higher than the cheapest benchmarked price from Sweden. The high pricing of mobile broadband services in New Zealand, combined with relatively low data caps, is likely to limit the degree of fixed-to-mobile substitution for broadband services.

#### Mobile phone data services

- The Commission has benchmarked the price of purchasing 200MB of data as an add-on to a mobile phone plan. New Zealand is ranked 5<sup>th</sup> out of the 5 countries included in the benchmarking, with the price of 200MB of data being significantly more expensive in New Zealand than the other countries benchmarked.

#### Recent developments

- 2degrees has recently released Mobile Broadband Zone Data Packs which give blocks of data of 1GB and greater for use on its own network. This data is lower priced than that available from Vodafone and Telecom. However, it is likely that 2degrees' ability to compete in the mobile broadband market remains constrained due to the limited geographic coverage of its network which currently covers Auckland, Wellington, Christchurch and Queenstown.

## Introduction

Mobile data is becoming increasingly important. Internationally, mobile average revenue per user (ARPU) is decreasing, with falling voice revenues being partially offset by increased use of mobile data. Telecom in its June quarter management commentary reported that its mobile ARPU increased due to continued growth in mobile data and roaming revenues.

Mobile networks can be used to provide higher speed access to the internet for consumers in one of two ways. The first and most popular way, at least until recently, is providing a specialist data plan that connects the consumer to the internet via a 3G mobile network by way of a data card or mobile modem that plugs into a laptop or PC. Mobile phones with internet access can also be 'tethered' to a laptop to provide a broadband service to the laptop, but this is currently uncommon in New Zealand.

The second way of providing mobile broadband is allowing consumers to access the internet directly from their 3G mobile phone. This can be provided by a plan tailored for mobile handsets

that enable internet access, such as the iPhone. Alternatively, it can be provided by an add-on to a conventional mobile prepay or postpay plan that allows mobile data to be purchased.

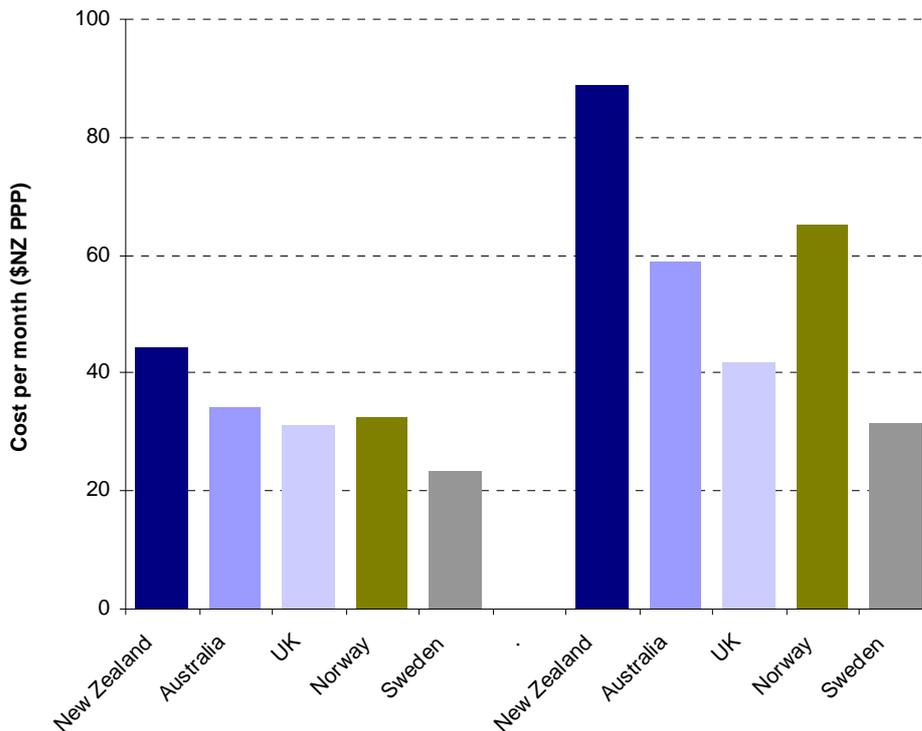
## Mobile data card benchmarking

A data card connection can be a substitute for fixed line broadband or as a supplement for laptop users when they are away from home. The Commission has undertaken indicative benchmarking of mobile broadband plans by looking at the cost of purchasing 2GB and 8GB of data a month using a standard 3G data card. The 8GB basket is used to test the feasibility of medium to high user of broadband data substituting mobile broadband for fixed line broadband on a permanent basis.

The Commission has benchmarked New Zealand's mobile broadband prices against those available from the two major providers in four other countries: Australia, the UK, Norway and Sweden. Only Telecom and Vodafone were therefore included in benchmarking for New Zealand.

The benchmarking results are shown in Figure 16. New Zealand is more expensive than the other countries benchmarked for both the 2GB and 8GB basket, although the gap is significantly greater for the 8GB basket.

**Figure 16: 3G Datacard Benchmarking Results – 2GB & 8GB**



Source: Commerce Commission

The data caps for the plans from Norway and Sweden that were selected for the 2GB basket were more than double the 2GB minimum. Therefore, the cost per GB for those countries would be significantly lower than that implied by Figure 16. The larger mobile operators in the UK did not

cater for mobile data card users wanting to use as much as 8GB per month, so a plan from the smaller but well established operator, 3, was used.

The results suggest that substituting mobile broadband for fixed line broadband for medium to high users of data is not yet financially attractive in New Zealand, but may be in some other countries.

2degrees is now offering 3G data plans in New Zealand in areas covered by its 3G network (Auckland, Wellington, Christchurch and Queenstown) and has just made its special 'introductory offer' prices permanent. Therefore, the 'Mobile Broadband' plans offered by 2degrees now undercut those offered by Telecom and Vodafone. Prepay data packs with 2GB can be purchased from 2degrees for \$40, but similar plans will cost around \$60 from Telecom or \$50 from Vodafone on a postpay plan.

### **Mobile phone data benchmarking**

Using a 3G mobile phone to access the internet typically uses much less data than using a laptop or PC. US studies suggest that smartphones<sup>29</sup> typically use between 50 and 300MB of data per month.<sup>30</sup> Accordingly, the Commission considers that a basket of 200MB per month is sufficient for reasonable usage of a smartphone.

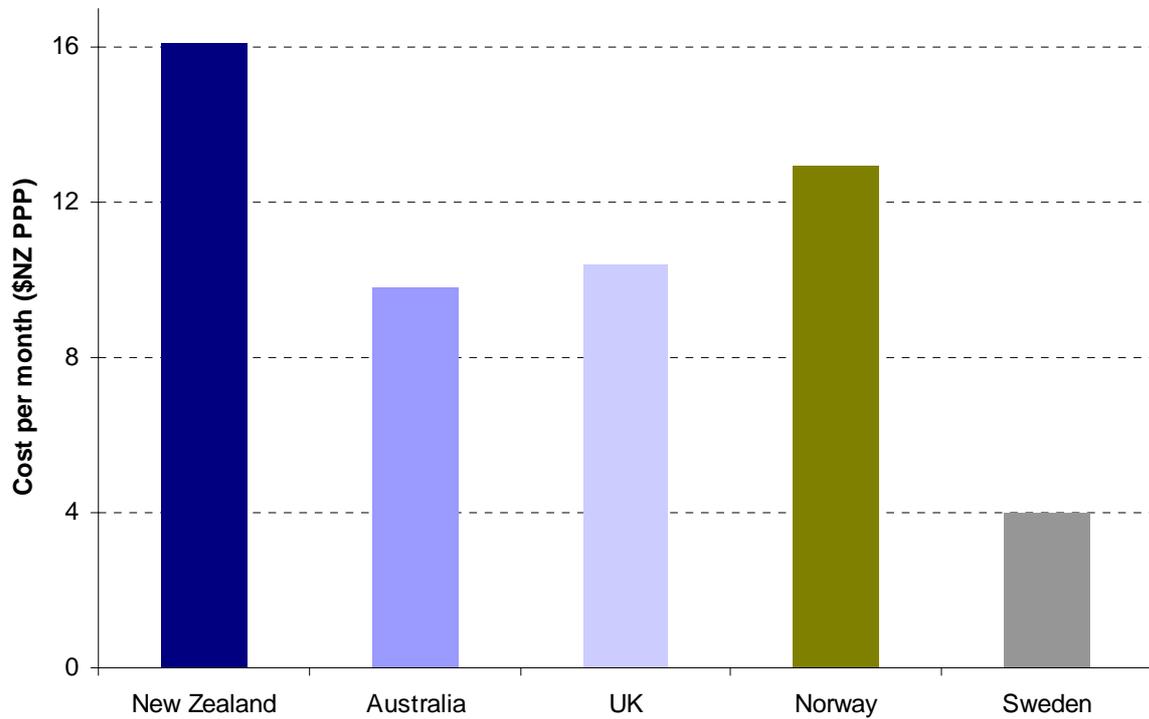
The Commission has benchmarked the price of purchasing 200MB of data as an add-on to a mobile phone plan. Mobile plans that include data along with calls and texts at an all inclusive price are more difficult to benchmark so this has not been attempted.

Again, the prices available in New Zealand have been compared to Australia, the UK, Norway and Sweden. The results of the benchmarking are shown in Figure 17 below.

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<sup>29</sup> A smartphone is a cellular telephone with built-in applications and internet access. In addition, smartphones have become application delivery platforms tuning cell phones into mobile computers.

<sup>30</sup> <http://blogs.consumerreports.org/electronics/2010/02/iphone-data-usage-smart-phones-smartphones-blackberry-mb-network-att-carrier-istress.html>

**Figure 17: 3G Mobile Phone Data Benchmarking Results – 200MB**

Source: Commerce Commission

The price of 200MB of data is significantly more expensive in New Zealand than the other countries benchmarked. The graph doesn't capture the fact that the Norwegian plan benchmarked had 500MB of data and the UK plan 1GB, which means the differential in cost per MB is even greater than that illustrated by the graph.

## COMPARISON WITH AUSTRALIA

### Key observations

- Australia is generally as poorly ranked as New Zealand (or even worse) in OECD benchmarking of residential retail fixed-line voice plans. For fixed-line broadband, New Zealand is cheaper than Australia for low and medium usage (2GB and 10GB), but significantly more expensive for high usage (40GB+).
- Australia is significantly cheaper than New Zealand in OECD benchmarking of mobile voice and SMS plans for medium and high usage baskets. In particular, for the 300 calls per month basket the cheapest price benchmarked for Australia is less than half that benchmarked for New Zealand.<sup>31</sup> For mobile data, Australia is cheaper than New Zealand in every usage basket.

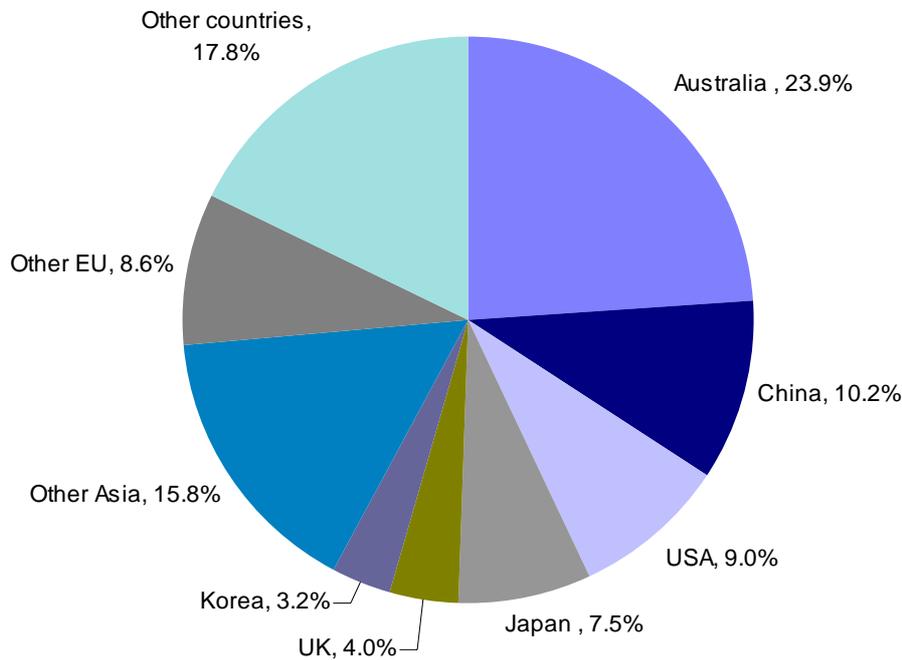
This section specifically compares benchmarked New Zealand retail telecommunications prices with those of Australia.

Australia is New Zealand's largest trading partner. In the year ended December 2009, two-way merchandise trade amounted to \$NZ16.2 billion, with Australia taking 23% of New Zealand's exports and supplying 19% of imports. Australia is New Zealand's top destination for overseas investment and New Zealand's largest source of foreign investment. In March 2009, New Zealand had \$35.6 billion invested in Australia, while Australia had \$96.2 billion invested in New Zealand.<sup>32</sup>

The latest available trade statistics show the share of New Zealand exports purchased by Australia at 23.9 per cent is more than double that of New Zealand's next biggest trading partner, China at 10.2 per cent. China is closely followed by USA at 9.0 per cent, as can be seen in Figure 18.

<sup>31</sup> The New Zealand price for the 300 calls basket is \$117.75, while the Australian price is \$54.66.

<sup>32</sup> <http://www.nzdmo.govt.nz/publications/nzefo/2010/17.htm>

**Figure 18: New Zealand Exports by Destination**

Source: Statistics New Zealand, 12 months ended May 2010 (provisional)

The *2025 Taskforce* considered Australia is an important benchmark for New Zealand for the following reasons<sup>33</sup>:

- Australia is a high-income English-speaking country to which the average New Zealander can most readily migrate;
- Australia is the country in which it is easiest to see and feel the differences in living standards;
- Australia is one of the higher income countries that has consistently been in the top half of the OECD group of countries over the last 150 years.

New Zealand is a competitor to Australia both in Australia, where New Zealand products often compete with Australian products, and also in international primary produce export markets. The Commission would be concerned if New Zealand's ability to trade and compete with Australia was compromised by poorly performing telecommunications markets.

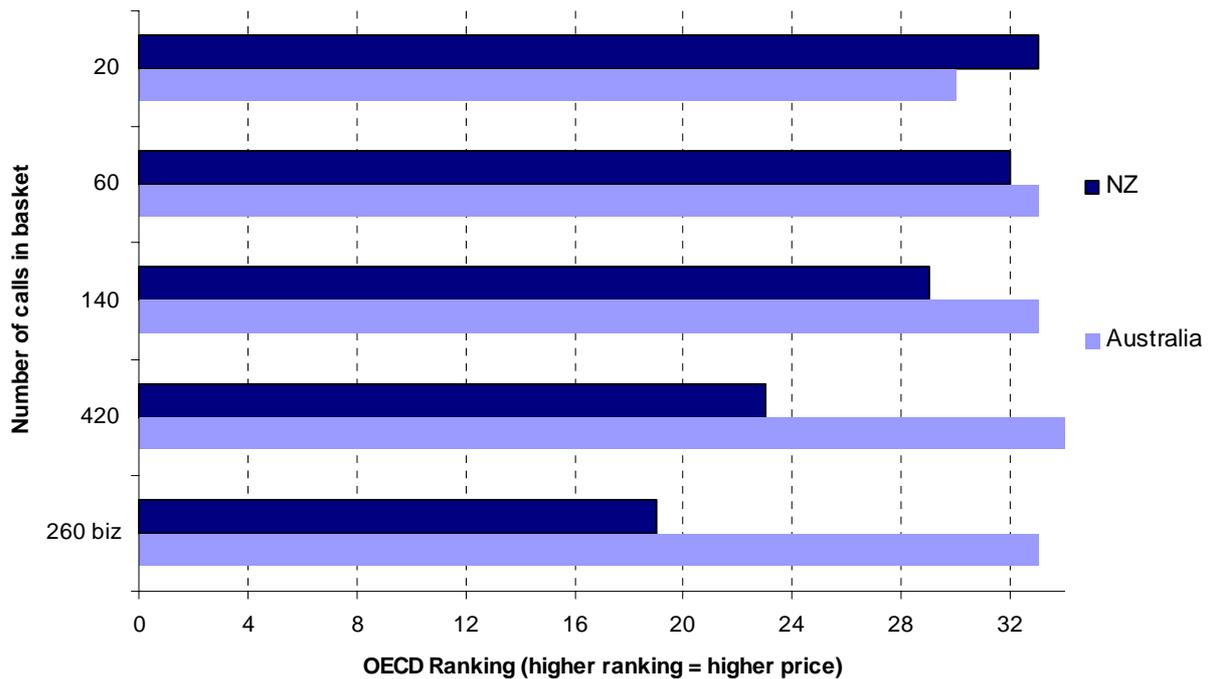
The *2025 Taskforce* noted that in 2009 Australia had a real GDP per capita 35 per cent higher than New Zealand. The total telecommunications market in Australia for 2008/09 was estimated by *IBISWorld* to be A\$40.6 billion (\$NZ PPP 43.8 billion) compared to the Commission's estimate for New Zealand of \$5.5 billion. This is approximately 3 per cent of GDP in both countries.

<sup>33</sup> <http://www.2025taskforce.govt.nz/firstreport/07.htm>

## Retail fixed line voice

The OECD rankings for Australia and New Zealand for each of the retail fixed voice baskets are shown in Figure 19. As was discussed in prior sections, New Zealand has a poor ranking in the low use baskets, although this improves slightly as the basket size increases (because of the high fixed monthly component of the price). Australia, on the other hand, does a little better than New Zealand for the low use baskets and performs more poorly as the basket size increases due to higher variable calling costs.

**Figure 19: OECD Ranking of New Zealand vs Australia for Retail Fixed Line Voice**



Source: Teligen T-Basket

In the 20 calls basket Australia has a better ranking than New Zealand with a price of NZ\$46.15 per month compared to New Zealand's \$52.57. Telstra has a moderately high line rental and calling rates. It has a fixed charge per call for local calls.

In the 140 calls basket Australia is more expensive than New Zealand, with a price of NZ\$144.94 per month. This is driven by Telstra's high fixed-to-mobile rates as well high rates for other call types.

In the 420 calls basket Australia ranks 34 out of the 34 OECD countries benchmarked compared to New Zealand's ranking of 23. In the 260 calls business basket Australia ranks 33 out of 33 OECD countries compared to New Zealand's ranking of 19.

## Retail fixed line broadband

For fixed line broadband Australia was more expensive than New Zealand for both the low user (2GB of data per month) and medium user (10GB of data) baskets. In PPP\$NZ terms (and including GST) the Australian low user plan benchmarked was \$44.05 compared to New Zealand's \$39.95 and the Australian medium user plan was \$55.12 compared to New Zealand's \$49.95.

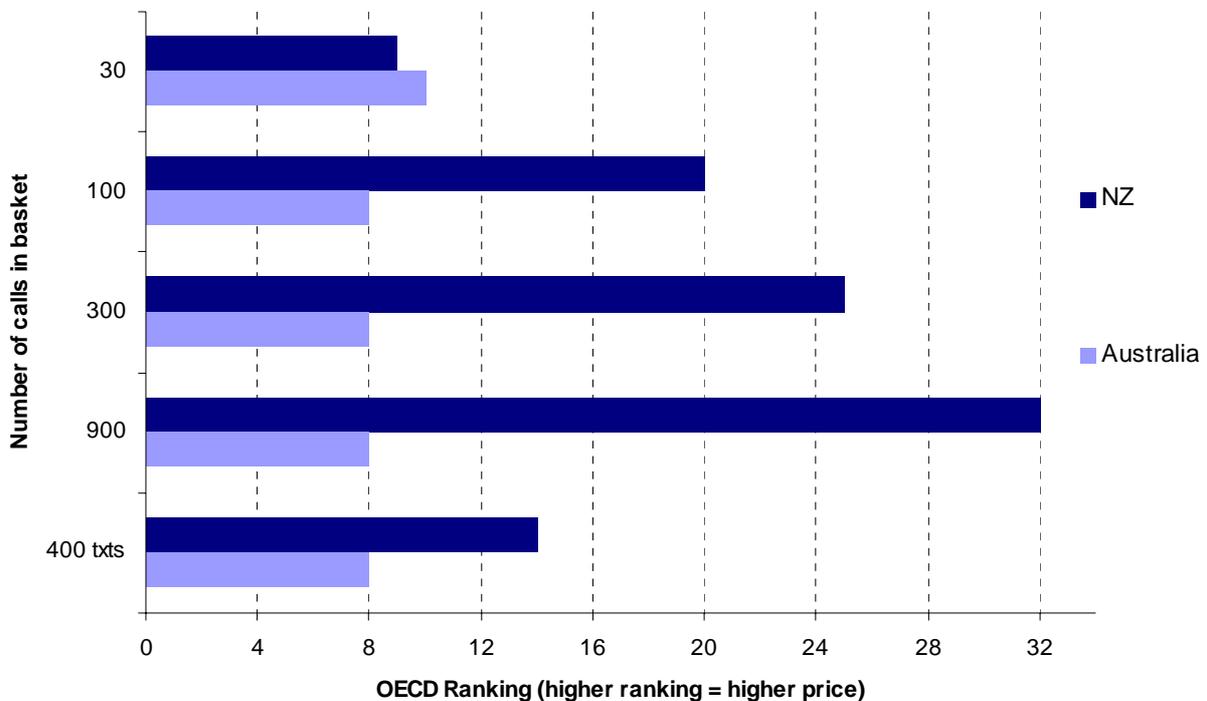
However, neither of the Australian operators benchmarked (Telstra and Optus) had plans tailored to meet the medium usage basket used by the Commission. For these operators the cheapest plan for the medium usage basket provided 50GB of data, which was more than enough for the high user (40GB) basket.

Consequently, Australia, along with the three other countries benchmarked, had a price well below New Zealand for the high user basket at \$55.12 compared to New Zealand's \$79.95. This means for a high user the cost of fixed line broadband in Australia was \$24.83 per month less (or 31 per cent cheaper) than New Zealand.

## Retail mobile voice and SMS

The mobile voice and SMS OECD rankings for Australia and New Zealand are shown in Figure 20 below. As was discussed in prior sections, New Zealand does better in the low use baskets and gets relatively more expensive as the basket size increases. Australia on the other hand starts off a little worse than New Zealand for the 30 calls basket and then improves to rank 8 out of 34 OECD countries for all the other mobile voice and SMS baskets.

**Figure 20: OECD Ranking of New Zealand vs Australia for Retail Mobile Voice and SMS**



Source: Teligen T-Basket

Australia's ranking is close to that of New Zealand in the 30 calls basket, with a similar price of NZ\$21.19 compared to New Zealand's NZ\$20.14.

For the 100 calls basket Australia is ranked 8 out of 34, with a price of NZ\$32.35 (which is equal to 64 per cent of the OECD average). This is \$23.15 per month less than the cheapest plan available in New Zealand.

For the 300 calls basket, Australia is ranked 8 out of 34 OECD countries with a price of NZ\$54.66. This is equal to 57 per cent of the OECD average and is under half the New Zealand price. Australian consumers of this basket who use Optus would be paying \$63.09 per month less than equivalent New Zealand consumers using Vodafone.

For the 400 messages basket Australia is ranked 8 out of 34 with a price of NZ\$21.19, which is equal to 56 per cent of the OECD average. This is only \$3.09 less than the New Zealand price.

### **Retail mobile broadband**

In the Commission's benchmarking of 3G mobile data card plans, Australia was ranked third for the 2GB basket and second for the 8GB basket. Australia ranked slightly ahead of Norway for the 8GB basket; however, the Norwegian plan selected for this basket provides 15GB of data. Australia was significantly cheaper than New Zealand for both baskets (particularly for the 8GB basket).

In \$NZPPP terms including GST, the Optus plan benchmarked for Australia for the 2GB basket had a price of \$38.59 per month compared to \$49.95 for a Vodafone plan in New Zealand. For the 8GB basket the price was for an Optus plan in Australia was \$66.16 compared to \$99.90 for a Vodafone plan in New Zealand.

In the mobile phone data price benchmarking, which used a 200MB basket, Australia had the second cheapest plan from the five countries benchmarked. The Australian plan offered by Optus has a price of \$9.08 per month, compared to New Zealand's \$18.00 for a Telecom plan which was nearly double the price.

## APPENDIX 1: UPDATED CHARTS FROM THE ANNUAL REPORT

The Commerce Commission collects information from telecommunications operators in New Zealand on a regular basis and publishes key market statistics based on the data received. The last annual monitoring report, which covered the 2008/09 year, was published in May 2010.

Since that time, further data has been collected. Updated key market statistics are presented in the table below.

### Key market statistics<sup>34</sup>

Snapshot: Telecommunication industry in NZ	2005/06	2006/07	2007/08	2008/09	2009/10
Fixed lines (million)	1.85	1.85	1.88	1.87	1.88
Number of unbundled lines	0	0	3,000	37,000	67,000
Total fixed broadband connections	480,000	684,000	853,000	980,000	1,050,000 <sup>35</sup>
Fixed broadband connections per 100 population	11.6	16.3	19.8	22.8	24 <sup>36</sup>
Mobile connections (million)	3.80	4.25	4.58	4.70	4.90
Active mobile connections per 100 population	92	102	108	109	113
Share mobile pre-paid (%)	68.2	67.8	67.6	66.1	67
Resold Telecom phone lines	-	168,000	262,000	326,000	374,000
Wholesale broadband connections (excluding UCLL)	100,000	165,000	251,000	285,000	312,000

Notable highlights from the 2009/10 statistics include:

- Broadband DSL connections continued to grow at a reasonable rate with the annual growth to June 2010 being 12 per cent. UCLL connections exhibited the strongest growth, reaching a total of 67,000.
- Total fixed line broadband connections reached 1.05 million as at 30 June 2010.
- Telecom continued to lose retail market share in the telephone and broadband markets.

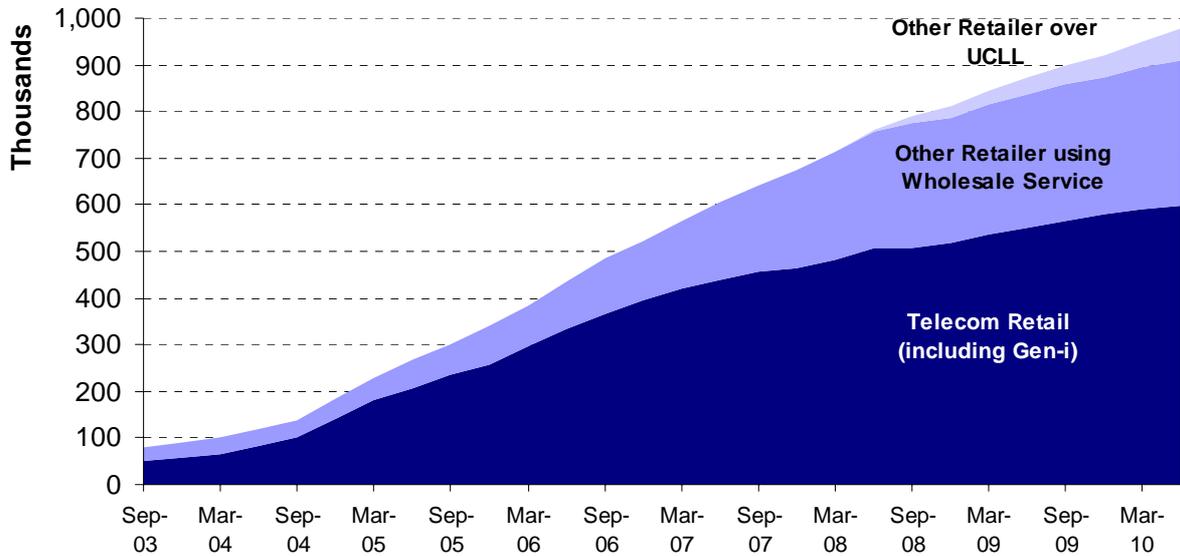
Some of the charts used in the Commission's 2009 telecommunications annual monitoring report illustrated publicly available data not reliant on the Commission's annual telecommunications industry questionnaire. The Commission has updated most of these graphs in this appendix.

<sup>34</sup> The data is for the year to 30 June unless otherwise specified.

<sup>35</sup> This measure no longer includes fixed wireless subscribers

<sup>36</sup> This measure no longer includes fixed wireless subscribers

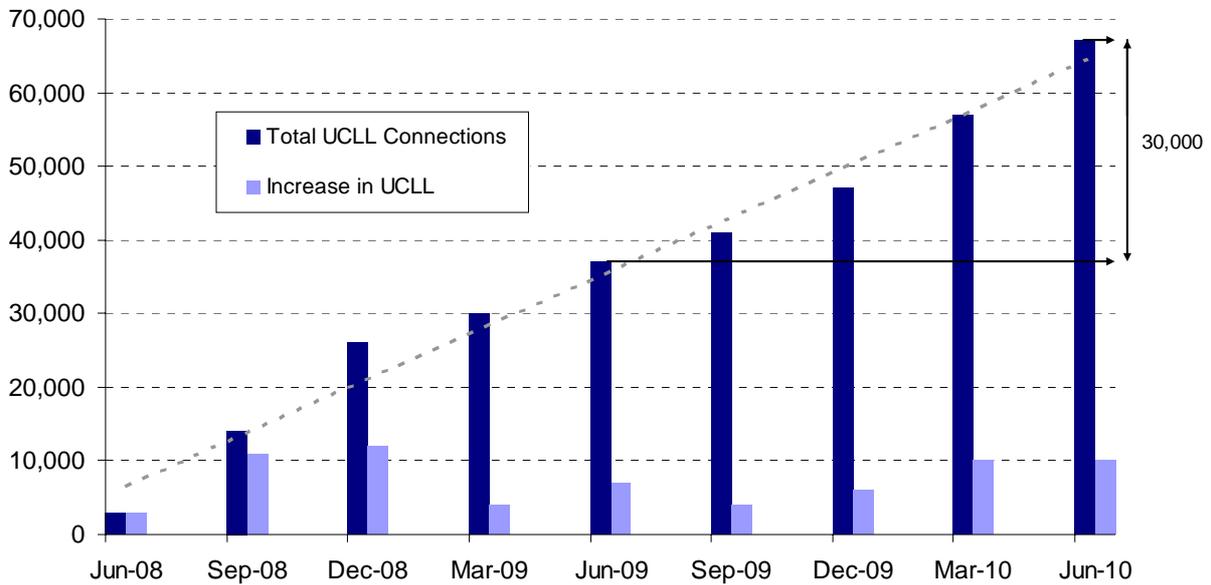
**Figure 21: DSL Retail and Wholesale Connections**



Source: Telecom

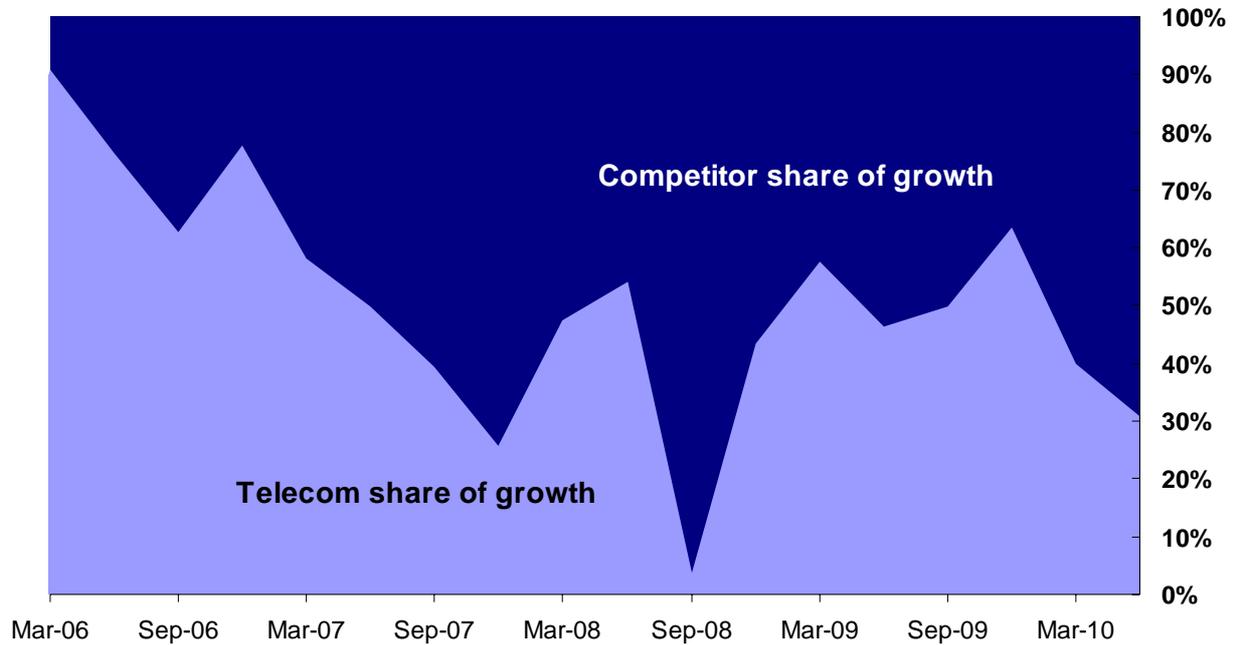
Broadband DSL connections continued to grow with the annual growth rate declining slightly from 12.5 per cent to 11.9 per cent per annum in the June quarter. DSL connections provided over UCLL are growing the most strongly, increasing by 30,000 over the year to June.

**Figure 22: Growth in UCLL Connections**



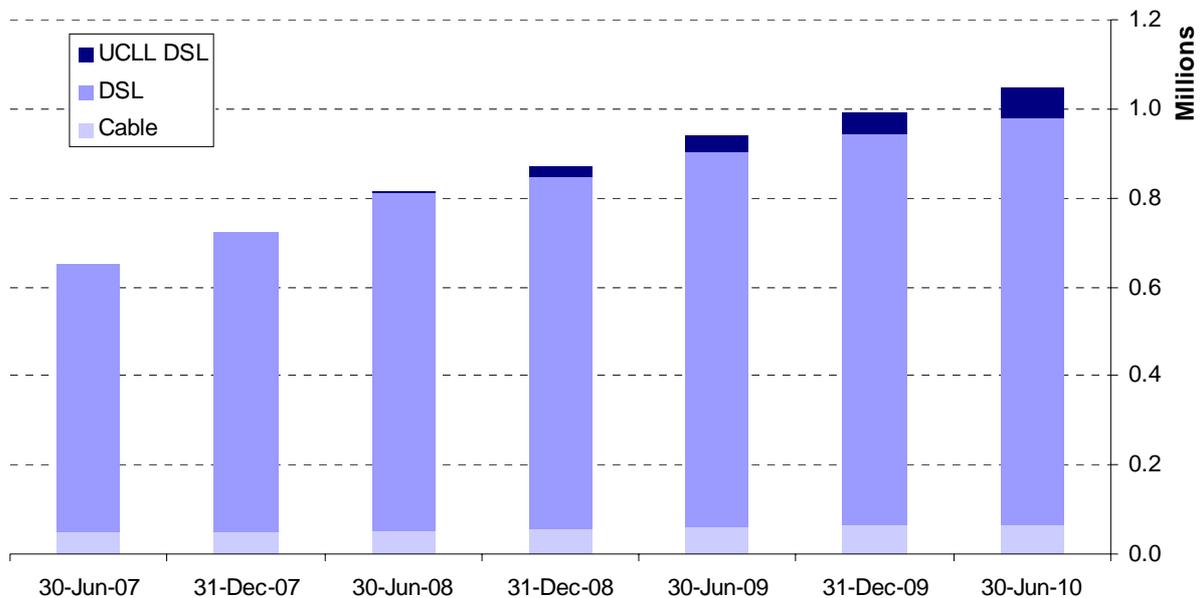
Source: Telecom

**Figure 23: Share of Growth in Retail DSL Connections**



Telecom’s share of the net increase in retail DSL connections has fallen significantly over the last two quarters and was 31 per cent for the June 2010 quarter. This may be due to a lack of new broadband promotions over this period.

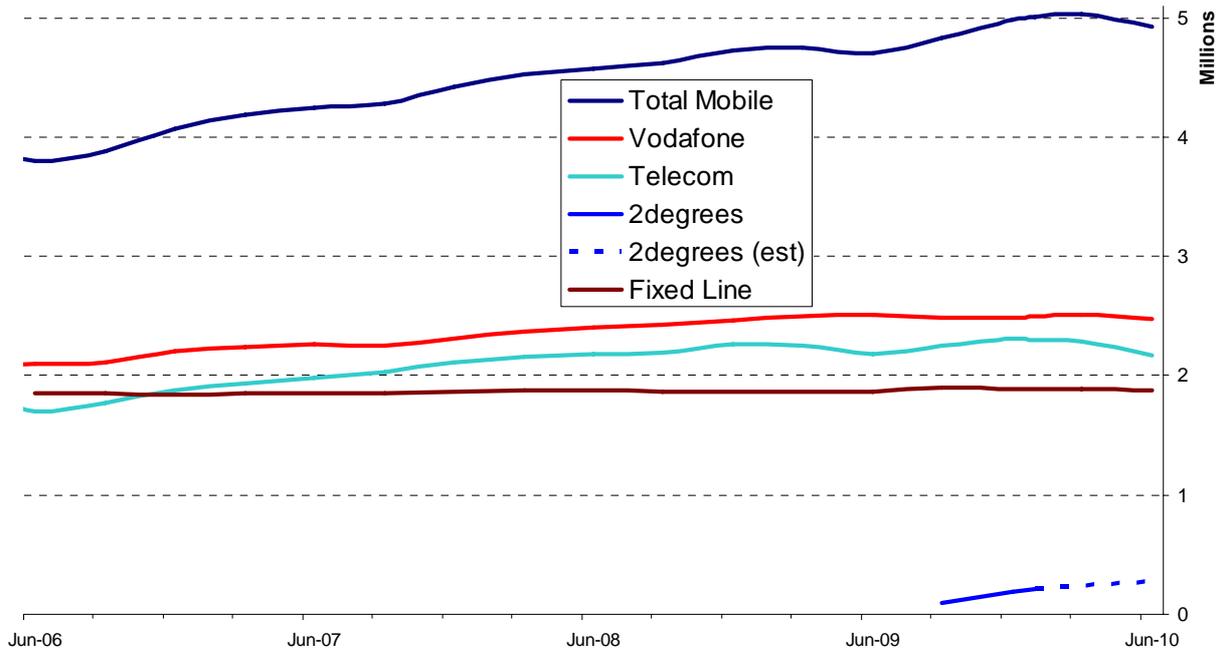
**Figure 24: Fixed Line Broadband Connections**



Total fixed line broadband connections have reached 1.05 million. The OECD now groups fixed wireless broadband connections together with mobile wireless broadband connections rather fixed

line broadband connections. Total fixed line connections are therefore the DSL connections shown in Figure 21 plus TelstraClear’s cable broadband connections and a small number of DSL connections that TelstraClear sells over its own inner city copper networks. TelstraClear has had little increase in cable broadband numbers so the increase is driven by increased DSL subscriptions shown in Figure 21.

**Figure 25: Total Fixed Line and Mobile Subscribers**



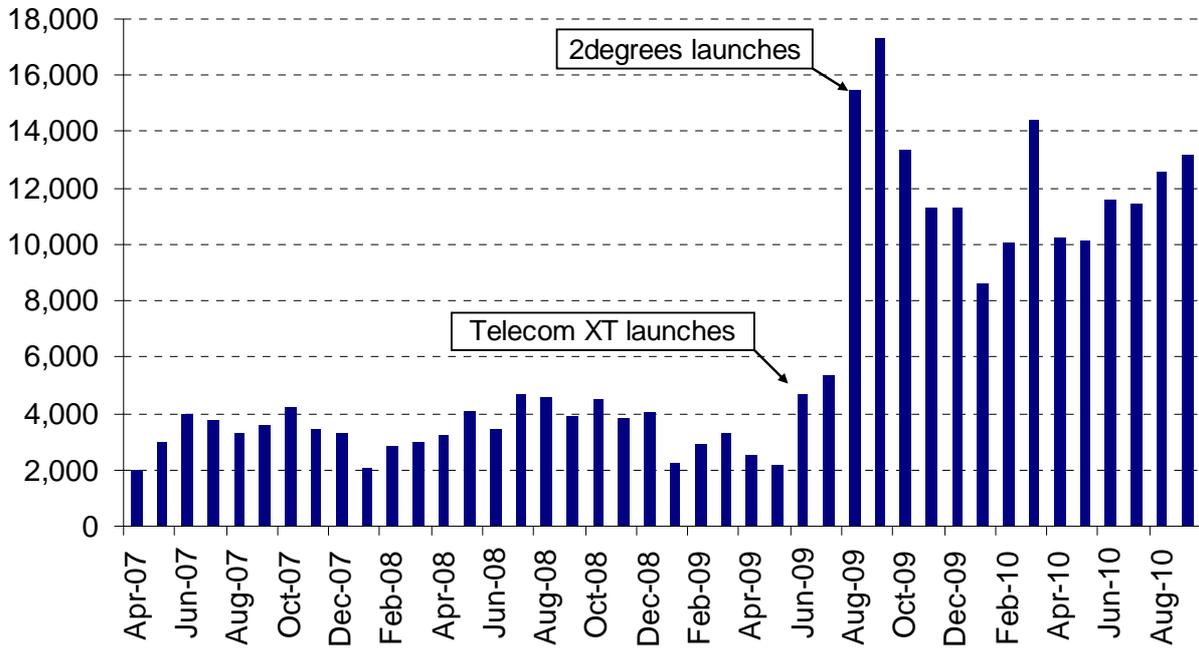
Source: Telecom, Vodafone, 2degrees, Commerce Commission

Total fixed line and mobile subscriber numbers are shown in Figure 25. The Telecom and Vodafone numbers are subscribers who were active in the prior six months, which would include some subscribers who had since switched networks. 2degrees reported subscriber figures only once, as at 31 January 2009, and included only subscribers active in the previous month.

Both total fixed line and mobile subscriber numbers appear to have plateaued. Mobile subscriber numbers may bounce back a little while fixed line numbers are expected to decline.

The number of mobile subscribers porting their number to another network continues at the much increased levels observed since 2degrees entered the market in August 2009, as can be seen in Figure 26.

**Figure 26: Mobile Numbers Ported each Month**



Source: TCF

## APPENDIX 2: FACTORS AFFECTING THE RESULT OF RETAIL PRICE BENCHMARKING

Factor	Sub Issue	Discussion	OECD Benchmarking Approach
Comparability	Sample	Consideration should be given to whether similar services from each country are included in the benchmark set. For example, if the service being benchmarked is the cheapest service offered by the incumbent, it is unlikely to be the cheapest in the market. It may be fair, however, to compare that service with equivalent services being offered by incumbents in other countries. Mobile plans can have many variations.	For retail fixed line voice benchmarking data is collected on the plans offered by the incumbent operator in each country. For mobile voice and SMS benchmarking the plans collected are those offered by two of the larger operators.
	Technology	Often a telecommunications service can be provided by different technologies or different variations of the same technology. This may impact on comparability. For example, a fixed line broadband service can be provided by DSL over copper or data over cable, and one may provide a better quality service.	The OECD benchmarking looks at the service provided within the general technology categories of fixed telephone lines and cellular mobile services.
	Quality	Some telecommunications services like broadband services can have significant quality differences. Such quality differences will affect comparability.	Quality should largely be comparable across the voice and SMS services being benchmarked.
Conversion	Exchange rate	When the price of services is compared between countries, each national price needs to be converted into common currency. This conversion can be based on the spot exchange rate or an average exchange rate over a longer period to iron out shorter term fluctuations. The option chosen can affect the result.	The market exchange rate is one option that can be selected with OECD benchmarking but is not the option used by the Commission.
	Purchasing power adjustments	Rather than using market exchange rates, the exchange rate used for conversion can be adjusted to take account of the differing cost of living in different countries. Such an adjusted exchange rate is called a purchasing power parity (PPP) exchange rate.	The OECD calculates its own PPP rates which are referred to as OECD Comparative Price Levels. The Commission chooses to use these PPP rates.
	Tax	The retail price of telecommunications services usually includes a value added tax (VAT) like GST, and the tax rate varies between countries. A better indication of retail price differences between countries may be gained by excluding retail taxes.	It can be chosen whether to include VAT or not. The Commission chooses to exclude VAT.
Bundling	Discount allocation	It is common for telecommunications services to be sold at a discount when two or more services are purchased. The discount might not be allocated evenly to each service.	The stand alone price of telecommunications plans is used.
	Imputed price	Sometimes telecommunications services like broadband are only available in a bundle with another service like voice. An imputed price for the 2 <sup>nd</sup> service is therefore required to price the first service.	Bundled prices aren't used so no imputation is needed.
	Custom deals	Larger businesses usually negotiate a confidential price for a customised package of telecommunications services, making it difficult to benchmark the price of affected telecommunications services and to make any such benchmarking publicly available.	OECD benchmarking uses baskets applicable to residential customers and small businesses only.

## APPENDIX 3: DATA SOURCES AND BENCHMARKING PROCESS

### OECD benchmarking data collected by Teligen

For OECD benchmarking, details of publicly available retail telecommunications plans are used to calculate the lowest price to fill each OECD usage basket in each OECD country. The data gathering is performed by Teligen<sup>37</sup> and its T-Basket<sup>38</sup> database is available for purchase on a subscription basis.

The OECD regularly reviews the usage baskets that are employed in the benchmarking process as consumption patterns change. The latest Teligen T-Basket includes updated OECD 2010 usage baskets adopted in March 2010. These baskets have been developed based on actual traffic and consumption data collected from operators and regulators in OECD member countries. More detail on the contents of the baskets and how they have changed is shown in Appendix 5.

For its fixed line benchmarking Teligen have collected tariff data for Telecom's two standard residential phone plans, Homeline<sup>39</sup> and Anytime<sup>40</sup>, and one standard business plan, BusinessTime<sup>41</sup>. The prices used are those that apply in Auckland for Homeline, Auckland, Wellington and Christchurch for Anytime, and the standard nationwide price of BusinessTime. Telecom's residential phone plans are cheapest in Wellington and Christchurch because Telecom has to compete with TelstraClear's independent network. Prices are also cheaper in Auckland which is where there is most competition from other retailers via services provided over unbundled copper local loops.

OECD fixed line benchmarking baskets are now identified by the number of calls assumed to be made per month, with the residential baskets being for 20, 60, 140 and 420 calls. There are also two business baskets, the 100 calls basket and the 260 calls basket. Most of the calls in each basket are assumed to be local calls with a progressively smaller percentage being national, fixed-to-mobile and international calls. More details are given in Appendix 5.

The OECD mobile baskets are now identified by the number of calls, or texts for the predominantly text basket, assumed to be made per month. There are baskets consisting of 30 calls, 100 calls, 300 calls, 900 calls and 400 texts. In addition, there is now a specific prepay basket which consists of 40 calls a month and 60 texts. More details are given in Appendix 5.

The results are indicative only and need to be interpreted with caution. The results are calculated using the OECD's \$US PPP rate for determining international rankings.

When comparisons between New Zealand plans are made, prices are expressed in \$NZ and GST is included to make the price most relevant to consumers. The OECD benchmarking results used in this report are derived from data collected in August 2010.

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<sup>37</sup> Telecommunications research specialists: <http://www.teligen.com/>

<sup>38</sup> Benchmarking service: [http://www.teligen.com/t\\_basket.asp](http://www.teligen.com/t_basket.asp)

<sup>39</sup> Standard Telecom residential telephone line plan that requires a monthly line rental be paid and full price paid for any telephone calls. Some call types have price caps but these apply only after calls of a much longer than average duration.

<sup>40</sup> Alternative residential telephone line plan that has a higher monthly line rental in return for lower priced telephone calls and better price caps.

<sup>41</sup> Standard Telecom business telephone line plan that has a slightly higher rental (\$51.95 + GST) than the residential plans but lower calling charges, except for local calls which are chargeable to businesses, and better price caps.

### **The Commission's price benchmarking data**

As the OECD has not developed any commonly used benchmarking baskets for fixed line and mobile broadband usage, the Commission has undertaken indicative retail price benchmarking by creating its own baskets. It has filled these baskets where possible using plans from two of the largest broadband providers from the following countries; New Zealand, Australia, UK, Norway and Sweden. The lowest price available in each country is selected as the benchmark.<sup>42</sup>

Prices have been converted to \$NZ using PPP rates obtained from the IMF website and VAT/GST excluded for international comparisons. The data was collected in late August and early September 2010. The complete set of this data is shown in Appendix 4.

A challenge with benchmarking broadband services is the difficulty in determining the speed and quality of broadband services and ensuring like services are compared. Typically only the maximum speed of a broadband service is publicly available, with an expected average speed sometimes being publicly available. The variability of the service is rarely measured, and even less frequently made publicly available.

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<sup>42</sup> Details of the providers and plans considered for the benchmarking are shown in Appendix 2

## APPENDIX 4: RAW DATA COLLECTED FOR COMMISSION BENCHMARKING

### Fixed Line Broadband Low User – at least 256kbps downstream speed, 2GB data

Country	ISP	Package	Speed	Data Cap	Monthly Charge	VAT %	Total	\$NZ PPP	Notes specific to plan
New Zealand	Telecom	Go	FS/FS	3GB	39.95	12.5	35.51	35.51	
New Zealand	TelstraClear	Highspeed 5G	4Mb/2Mb	5GB	44.95	12.5	39.96	39.96	Monthly charge calculated by subtracting phone line rental of \$36.95, includes cable modem rental
New Zealand	TelstraClear	HomePlan (DSL)	FS/FS	3GB	45.05	12.5	40.04	40.04	Monthly charge calculated by subtracting imputed phone line rental of \$36.95
Australia	Telstra	BigPond Turbo	1.5Mb/256kb	2GB	39.95	10.0	36.32	39.16	
Australia	Optus	30GB Broadband	FS/FS	10GB	39.99	10.0	36.35	39.20	A cable service that also includes 20GB of off peak data
UK	BT	Broadband Option 1	FS/FS	10GB	15.99	17.5	13.61	33.32	
UK	Virgin	Up to 10 Mb	10Mbps	Unlimited	12.50	17.5	10.64	26.04	Acceptable use policy and traffic management apply
Norway	Telenor	Bredbaand Basis	1.5MB/400kb	Unlimited	299	25.0	239.20	39.07	5000MB/500kb first 12 months
Norway	NextGenTel	Next1 Mini	2MB/400kb	Unlimited	298	25.0	238.40	38.94	
Sweden	TeliaSonera	Telia Bredband	256kb downl	Unlimited	229	25.0	183.20	31.47	
Sweden	Bredbandsbolaget	Bredband 2	2-6MB downl	Unlimited	298	25.0	238.40	40.95	249/NZ\$ PPP 42.76978 first 12 months incl. telephony and TV incl. first 12 months

### Fixed Line Broadband Medium User - Full speed or equivalent, 10GB data

New Zealand	Telecom	Explorer	FS/FS	10GB	49.95	12.5	44.40	44.53	
New Zealand	TelstraClear	Lightspeed 10G	10Mb/2Mb	10GB	54.95	12.5	48.84	48.97	
New Zealand	TelstraClear	HomePlan (DSL)	FS/FS	10GB	53.05	12.5	47.16	47.28	Monthly charge calculated by subtracting imputed phone line rental of \$36.95
Australia	Telstra	BigPond Elite 50GB	8Mb/384kb	50GB	69.95	10.0	63.59	68.56	
Australia	Optus	120GB Broadband	FS/FS	50GB	49.99	10.0	45.45	49.00	A cable service that includes 70GB of off peak data
UK	BT	Broadband and calls	FS/FS	10GB	14.49	17.5	12.33	30.19	
UK	Virgin	Up to 20 Mb	10Mbps	Unlimited	20.00	17.5	17.02	41.67	Acceptable use policy and traffic management apply
Norway	Telenor	Bredbaand Premium	16MB/800kb	Unlimited	399	25	319.20	52.14	299/NZ\$ PPP 48.83837 first 12 months
Norway	NextGenTel	Next2 Bredbaand	20MB/1MB	Unlimited	448	25	358.40	58.54	348/NZ\$ PPP 56.84198 first 12 months
Sweden	TeliaSonera	Telia Bredbaand	12-24MB downl	Unlimited	359	25	287.20	49.33	
Sweden	Bredbandsbolaget	Bredband 24	12-24MB downl	Unlimited	368	25	294.40	50.57	249/NZ\$ PPP 42.76978 first 12 months incl. telephony and TV incl. first 12 months

**Fixed Line Broadband High User - Full speed or equivalent, 40GB data**

Country	ISP	Package	Speed	Data Cap	Monthly Charge	VAT %	Total	\$NZ PPP	Notes specific to plan
New Zealand	Telecom	Pro	FS/FS	40GB	79.95	12.5	71.07	71.19	
New Zealand	TelstraClear	Lightspeed 50G	10Mb/2Mb	50GB	109.95	12.5	97.73	97.86	
New Zealand	TelstraClear	HomePlan (DSL)	FS/FS	50GB	98.05	12.5	87.16	87.28	Monthly charge calculated by subtracting imputed phone line rental of \$36.95
Australia	Telstra	BigPond Elite	8Mb/384kb	50GB	69.95	10.0	63.59	68.56	
Australia	Optus	120GB Broadband	FS/FS	50GB	49.99	10.0	45.45	49.00	A cable service that also includes 70GB of off peak data
UK	BT	More Broadband and Calls	FS/FS	40GB	17.99	17.5	15.31	37.48	
UK	Virgin	Up to 20 Mb	10Mbps	Unlimited	20.00	17.5	17.02	41.67	Acceptable use policy and traffic management apply
Norway	Telenor	Bredbaand Premium	16Mb/800kb	Unlimited	399	25.0	319.20	52.14	299/NZ\$ PPP 48.83837 first 12 months
Norway	NextGenTel	Next2 Bredbaand	20MB/1MB	Unlimited	448	25.0	358.40	58.54	348/NZ\$ PPP 56.84198 first 12 months
Sweden	TeliaSonera	Telia Bredbaand	12-24MB downl	Unlimited	359	25.0	287.20	49.33	
Sweden	Bredbandsbolaget	Bredband 24	12-24MB downl	Unlimited	368	25.0	294.40	50.57	249/NZ\$ PPP 42.76978 first 12 months incl. telephony and TV first 12 months

**Mobile Broadband Average Mobile Data Card User - 3G speeds, 2GB data**

Country	ISP	Package	Plan Type	Data Cap	Monthly Charge	VAT %	Total	\$NZ PPP	Notes specific to plan
New Zealand	Telecom	Mobile Broadband	Postpay	2GB	59.95	12.5	53.29	53.29	
New Zealand	Telecom	Mobile Broadband	Prepay	2GB	59.95	12.5	53.29	53.29	
New Zealand	Vodafone	Broadband Super	Postpay	2GB	49.95	12.5	44.40	44.40	
New Zealand	Vodafone	Broadband Surfer	Prepay	2GB	120.00	12.5	106.67	106.67	
Australia	Telstra	BigPond Liberty	Postpay	3GB	49.95	12.5	44.40	44.40	
Australia	Telstra	BigPond Prepay	Prepay	2GB	50.00	12.5	44.44	44.44	
Australia	Optus	My Wireless 35	Postpay	2GB	35.00	10.0	31.82	34.30	Data is double for first 12 months
Australia	Optus	Pre-paid Mobile	Prepay	2GB	80.00	10.0	72.73	78.41	
UK	Vodafone	Broadband	Prepay	2GB	80.00	10.0	72.73	78.41	
UK	Vodafone	Starter	Postpay	3GB	15.00	17.5	12.77	31.25	
UK	Vodafone	Pay as you go	Prepay	3GB	15.00	17.5	12.77	31.25	
UK	Virgin	Mobile Broadband	Postpay	3GB	15.00	17.5	12.77	31.25	No prepay offer available

Norway	NetCom	NetCom Hele Tiden	Postpay	6GB	249.00	25	199.20	32.54
Norway	Telenor Mobil	Dag&Natt	Postpay	5GB	299.00	25	239.20	39.07
Sweden	TeliaSonera	Paa Gaang	Postpay	5GB	179.00	25	143.20	24.60
Sweden	Tele2	Medium	Postpay	5GB	169.00	25	135.20	23.22

#### Mobile Broadband High Mobile Data Card User - 3G speeds, 8 GB data

Country	ISP	Package	Plan Type	Data Cap	Monthly Charge	VAT %	Total	\$NZ PPP	Notes specific to plan
New Zealand	Telecom	Mobile Broadband	Postpay	8GB	109.90	12.5	97.69	97.81	
New Zealand	Vodafone	Broadband Ultra	Postpay	8GB	99.90	12.5	88.80	88.80	12 month 4GB plan with double your data add-on and remaining data at 10cMB
Australia	Telstra	BigPond Liberty	Postpay	10GB	119.95	10.0	109.05	109.15	Stand alone price for 12 month contract
Australia	Optus	BYO 60	Postpay	8GB	60.00	10.0	54.55	58.81	
UK	Three	Mobile Broadband	Postpay	15GB	20.00	17.5	17.02	41.67	
Norway	Telenor Mobil	Dag&Natt Mobilt Bredbaand	Postpay	Unlimited	328.00	25	262.40	45.07	After 5GB speed is reduced to 100kbit/s so I do not think this plan qualifies
Norway	NetCom	Premium	Postpay	15GB	499.00	25	399.20	65.20	
Sweden	TeliaSonera	Fri	Postpay	10GB	229.00	25	183.20	31.47	
Sweden	Tele2	Large	Postpay	Unlimited	229.00	25	183.20	31.47	

#### Mobile Broadband Internet Access via Mobile Phone - 3G speeds, 200MB data

New Zealand	Telecom	Mobile Broadband	Pre or Post	240MB	18.00	12.5	16.00	16.00	
New Zealand	Vodafone	Broadband Lite	Pre or Post	200MB	20.00	12.5	17.78	17.90	
Australia	Telstra	Browsing Pack	Postpay	200MB	10.00	12.5	8.89	9.58	
Australia	Optus	Rev-Up Data	Prepay	200MB	10.00	10.0	9.09	9.80	
Australia	Optus	Classic	Postpay	350MB	9.99	10.0	9.08	9.79	
UK	Vodafone	Flexi Pack	Postpay	500MB	7.50	17.5	6.38	15.63	
UK	Virgin	Mobile Web	Prepay	1GB	5.00	17.5	4.26	10.42	
Norway	NetCom	MobilSurf	Postpay	2GB	129.00	25	103.20	16.86	
Norway	Telenor	MobilSurf	Postpay	500MB	99.00	25	79.20	12.94	
Sweden	TeliaSonera	MobilSurf	Postpay	1GB	69.00	25	55.20	9.48	
Sweden	Tele2	Small	Postpay	200MB	29	25	23.20	3.98	

