Market Clarity

Australia's Source for Telecommunications Intelligence

Understanding the Trans-Tasman Broadband Value Gap: ISP Costs in Australia and New Zealand

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Executive Summary

In this report, Market Clarity provides an analysis of ISPs' reported costs for residential fixed broadband services in Australia and New Zealand.

Market Clarity's analysis of ISP costs is based on our interviews with Tier 2 and Tier 3 ISPs delivering residential broadband services, and analysis of questionnaire responses. Tier 1 carriers have been excluded from this study, because of their considerable infrastructure investments, and their status as wholesale suppliers to lower-tier providers.

We have focused on the provision of residential ADSL services, so as to ensure the comparability of results between different ISPs, and between Australia and New Zealand.

Such an analysis is important both in the current industry context, and also in light of moves in both Australia and New Zealand to implement universal high-speed broadband services: the NBN (National Broadband Network) in Australia, and the UFB (Ultra Fast Broadband) and associated projects in New Zealand.

More immediately, however, this analysis is designed to help inform readers of the possible underlying drivers for the significant gaps which exist between the value of broadband services in Australia and New Zealand.

Market Clarity noted considerable reluctance by ISPs to disclose certain cost items. This may be due to the constraints of wholesale supplier non-disclosure agreements. For Australia, Market Clarity holds considerable benchmark data against which we have been able to test respondent information. While we do not have similar information for New Zealand, we have tested our assumptions with informed industry sources.

Market Clarity welcomes contact from all providers with respect to their data, for inclusion in future studies. A strong benchmark is to the benefit of all participants in such studies, allowing participants to compare their performance to their peers, as well as driving competitive pricing on an industry-wide basis.

Key Findings

- Australian customers acquire considerably higher quota plans (median 115 GB per month) than New Zealand customers (median 25 GB per month). Surprisingly, Australian median consumption per-customer, at 19.9 GB per month, is only 6.4 GB per month greater than New Zealand customers (13.5 GB per month).
- Although Australian ISPs reported higher ARPU than New Zealand ISPs, this is not rewarded with higher profit margins. Network costs per customer in Australia represent a higher proportion of ARPU than they do in New Zealand. New Zealand respondents spend around $AU26.07, or $NZ33.50 per customer, per month on network costs (network access, backhaul and IP Transit); Australian respondents spend $AU37.54, or $NZ48.24, per customer, per month on total network costs.

- In particular, Market Clarity found that New Zealand respondents to this study spend less than Australian respondents on domestic backhaul and IP Transit services, on a per-customer basis.
- ISPs in both countries cite domestic backhaul costs as a growth constraint to offering higher quota allowances to residential broadband customers. We note that the relationship between the per-customer monthly cost and the average capacity buy price is indicative of the respondents' provisioning policies, location and distance of backhaul purchases, purchase volume, and wholesale backhaul costs.
- While New Zealand ISPs cited the costs of international data and IP Transit as growth constraints, the reluctance of New Zealand study participants to disclose raw purchase prices makes it difficult to draw firm conclusions. As with domestic backhaul, the per-customer price is indicative of the provisioning policies of respondents, relative to customer numbers and traffic.
- Australian respondents reported median profit margins on network access (as a single cost component) of 46.1%, whereas New Zealand respondents reported median profit margins on network access of 54.0%. Profitability after network access, in either country, will be affected by the relative distribution of an ISP's on-network / off-network customers, since on-network customers are the most profitable.
- Taking into account all network costs (network access, domestic backhaul and IP Transit), Australian respondents reported median profit margins on all network costs of 26.3%, whereas New Zealand respondents reported median profit margins on all network costs of 38.8%.
- Overall profit margins were much more difficult to determine, as many respondents only reported on network costs, as other costs (such as customer acquisition, customer support, internal IT, business administration, depreciation, interest and tax) were not directly tracked on a per product basis.
- In Australia, ISPs cited the current NBN Co pricing model as an issue. In particular, respondents complained about the tiered nature of the CVC pricing construct, and the large number of NBN POIs (Points of Interconnect). They also cited the requirement to invest capex in multiple technologies (existing DSLAM infrastructure and the NBN) as issues.
- Respondents from New Zealand also nominated the monopoly in the non-government television broadcasting industry as a very important constraint. On a similar note, one Australian ISP cited lack of access to content that is attractive enough to substantially change customers' download behaviours.

1 Introduction

In this study, Market Clarity reports on an investigation into the costs borne by Tier 2 and Tier 3 ISPs providing retail residential broadband services in Australia and New Zealand.

Market Clarity excluded incumbents (that is, Telstra and Telecom New Zealand) from this study, instead focussing on lower-tier providers who must rely on upstream wholesalers to deliver their services. This decision was made so as to avoid distortion in our analysis. An incumbent — and, for that matter, an upper-tier provider such as Optus or iiNet — holds significant backhaul infrastructure (and in Optus' case international cable capacity), which would make it's responses to (for example) domestic and international data costs non-representative of the remainder of the market.

We have focused on the provision of residential ADSL services, so as to ensure the comparability of results between different ISPs, and between Australia and New Zealand.

Such an analysis is important both in the current industry context, and also in light of moves in both Australia and New Zealand to implement universal high-speed broadband services: the NBN (National Broadband Network) in Australia, and the UFB (Ultra Fast Broadband) and associated projects in New Zealand.

More immediately, however, this analysis is designed to help inform readers of the possible underlying drivers for the significant gaps which exist between the value of broadband services in Australia and New Zealand.

Market Clarity documented this "broadband value gap" in 2011 in ***Closing the Trans-Tasman Broadband Value Gap: Comparing Prices in Australia and New Zealand***.[1]

While New Zealand service providers, in particular, have moved to increase the download allowances offered with their services, the gap has only narrowed rather than disappeared.

This reports seeks to document the differences in cost structures between the two countries.

It's important to note that cost differences show considerable variation not only between the two nations, but also between ISPs within a country. This will be explored in greater detail throughout this document.

1.2 Survey Methodology

Market Clarity interviewed Tier 2 and Tier 3 ISPs in Australia and New Zealand using a structured questionnaire to capture and compare responses.

[1] This report is published at http://www.marketclarity.com.au/freebies

In designing its questionnaire, Market Clarity sought to capture as much detail on ISPs' costs as possible, while accepting that many ISPs structure their costs in such a way that they were unable (or, for reasons of corporate confidentiality, unwilling) to respond to each possible item.

Items for which Market Clarity sought responses from ISPs included the following:

1. Number of residential customers
2. Network access costs (ULL, UCCL, LSS costs, wholesale ADSL service costs, or similar services)
3. Domestic backhaul costs (the cost of transporting customer traffic from the access network to the ISP's own infrastructure). Market Clarity also asked respondents to report the domestic backhaul capacity purchased, and purchase price in $/Mbps per month format.
4. Internal IT system costs
5. Customer acquisition / marketing costs
6. Customer support
7. International data services (including IP Transit if this is bundled with the international service). Market Clarity also asked respondents to report the capacity of their international data services.
8. International IP Transit (if unbundled from international data services). Market Clarity also asked respondents to report the International IP Transit capacity purchased.
9. Domestic IP Transit (if purchased separately from other services such as international IP Transit). Market Clarity also asked respondents to report the capacity of domestic IP Transit purchased, and purchase price in $/Mbps per month format.
10. Business administration costs
11. Depreciation
12. Interest and tax

Many ISPs nominated several of these items as accounted "below the line", by which they mean that some cost items are not applied to individual lines of business. Where possible or available, Market Clarity sought estimates as to how these items would affect the costs of delivering broadband services.

In addition, Market Clarity sought information on the following:

1. Average quota purchased by customers
2. Average customer download consumption
3. Typical network per-user bandwidth allocations and contention ratio (where only the contention ratio was supplied, this formed the basis of a calculation of per-user bandwidth allocations)
4. Typical unbundled service ARPU
5. Typical bundled service ARPU
6. Typical profit margin on services

Market Clarity also asked providers to nominate the factors they believe will have the greatest impact on the growth in download allowances offered to customers in the near-to-medium term.

Figure 1 (Australia) and Figure 2 (New Zealand) summarise the questionnaire items receiving informative responses.

Figure 1. — Australian ISP Reporting of Product Level Cost and Key Metrics: Residential Broadband Services

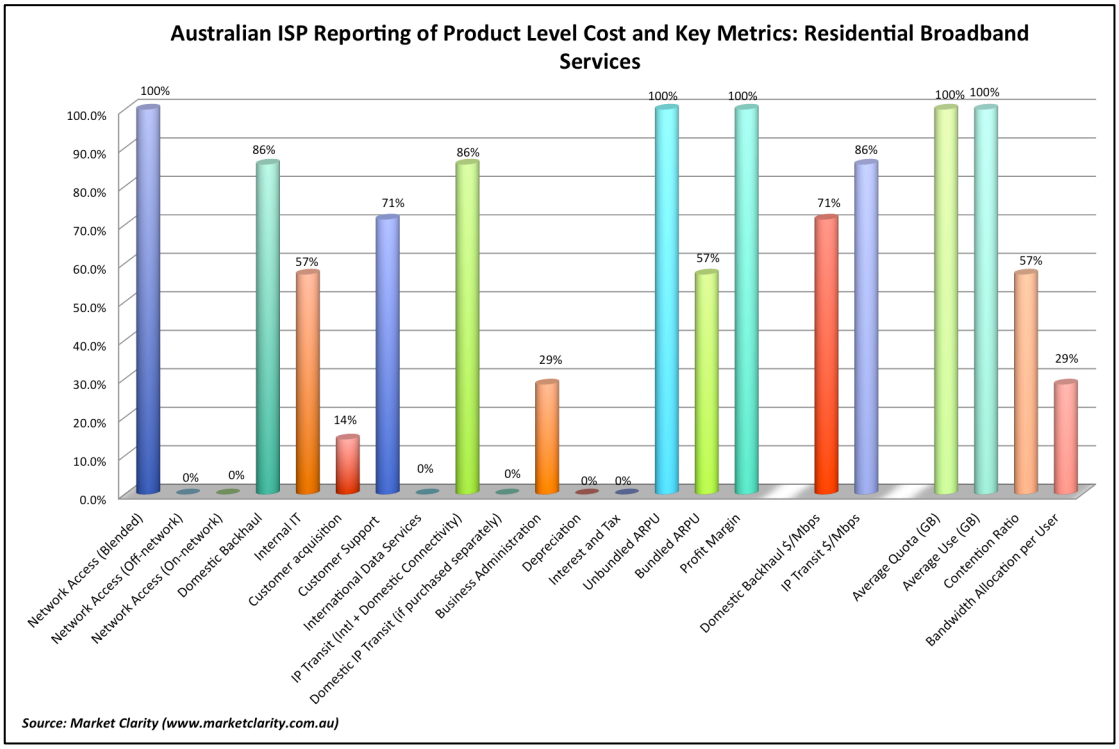
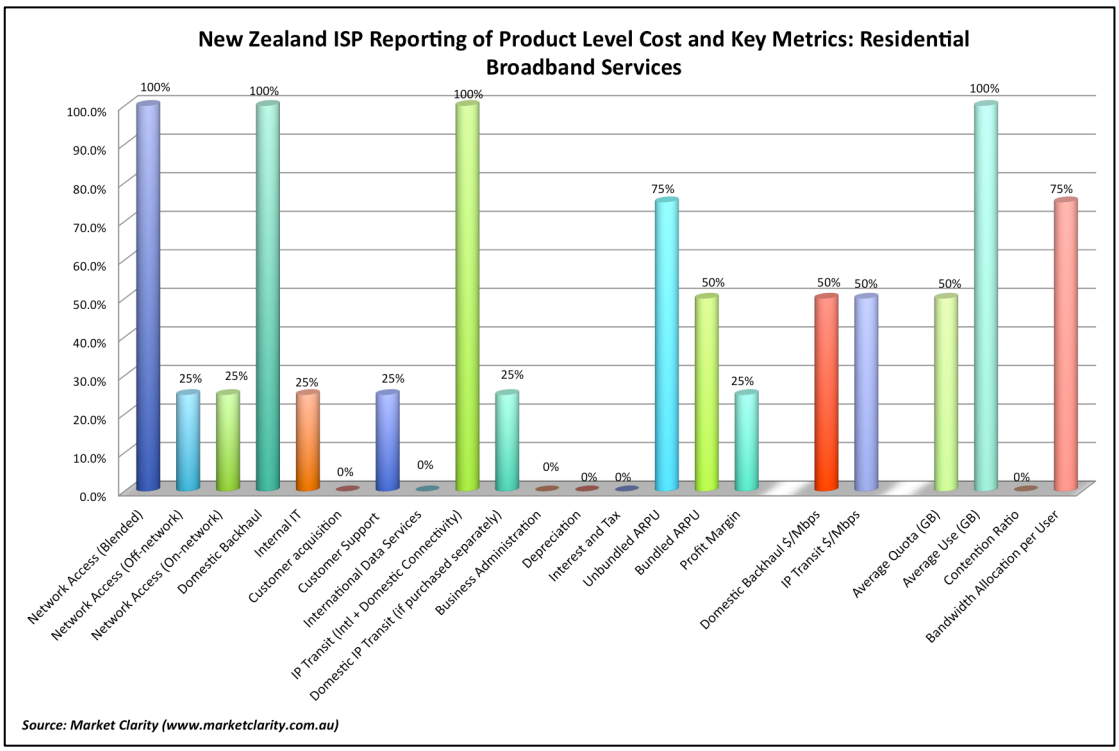


Figure 2. — New Zealand ISP Reporting of Product Level Cost and Key Metrics: Residential Broadband Services



Market Clarity has also used data provided by respondents to obtain, where necessary, estimates of key data points not directly provided.

ISPs generally reported either contention ratio or end-user bandwidth allocations, allowing Market Clarity to estimate end-user bandwidth allocations in Australia and New Zealand.

1.3 Exchange Rates

Costs provided by study respondents have been reported in local currency, and normalised to Australian dollars and New Zealand dollars for this analysis, using the median of exchange rate tables published by the Reserve Bank of Australia for the January to May 2012 period. An exchange rate of $NZ1.2850 per $AU1, was used in this comparison.

2 Australian ISP Costs

In this section, Market Clarity presents the results of its analysis of the costs borne by Australian retail ISPs delivering residential ADSL services.

2.1 Distribution of Australian ISPs' Network Expenditure

Table 1 summarises the network expenditure items reported by the Australian sample of service providers. These include network access costs, domestic backhaul, and IP Transit services.

Table 1. — Median Network Expenditure Distribution: Australian ISPs

	Network Access - % of Total Network Expenditure	Domestic Backhaul - % of Total Network Expenditure	IP Transit - % of Total Network Expenditure
Median Australian ISPs	72.6%	14.5%	11.6%

It should be noted that the above distribution represents the median expenditure on each category from the sampled ISPs. On an individual ISP basis, higher costs in one item will correspond to relatively lower costs in other items. In other words, the ISPs reporting the lowest proportional spend on network access (66.5% of total network costs) will report a relatively higher proportion of spend on domestic backhaul and / or IP Transit.

For example, the respondent reporting the highest proportion spend on network access spent proportionally the lowest (4.2%) on domestic backhaul, and the highest (16.5%) on IP Transit. As a result, the above table, reflecting industry median expenditure in each category, does not add up to 100%.

The IP Transit category, as noted in the questionnaire, offered respondents the opportunity to nominate the cost of domestic and international IP Transit separately, and to nominate international data services separately from international IP Transit.

All Australian respondents reported that they purchase domestic and international IP Transit as a single product. Some respondents, however, stated that they also purchase international data transmission services as a distinct product for capacity to key traffic destinations such as the US, enabling them to peer or acquire IP Transit in the US rather than in Australia.

It is apparent that in Australia, IP Transit service costs, which have been declining over the course of more than a decade in the face of growing competition, no longer play a dominant role in the cost base of providing residential broadband services.

2.2 Network Access Costs

Table 2 reports the median network access costs reported by Australian respondents to the study.

Table 2. — Median Network Access Costs: Australian ISPs

Network Access Cost	Per Customer, Per Month (AUD)
Median Australian ISPs	$28.69

While there is a considerable gap between the industry low and industry high in the Australian market, Market Clarity would emphasise that the inclusions in network access vary between providers.

Some respondents to the study were able to report on network access costs such as ULL or LSS in response to this item. For others, who do not operate DSLAM infrastructure, network access reflects the purchase of a wholesale ADSL product, which is acquired on a different basis to ULL / LSS services.

A number of respondents utilise a combination of their own DSLAM infrastructure and wholesale ADSL services. In some cases, these respondents provided Market Clarity with a blended cost per customer. In other cases, separate on-net and off-net costs were reported.

Some respondents, as pure-play resellers with minimal infrastructure of their own, acquire a service which bundles services such as AGVCs (aggregated virtual circuits) and IP Transit in a single per-customer cost.

Because of the representation of purely retail customers in the study sample, network access cost represents a combination of ULL purchases, LSS purchases, wholesale DSL, and in some cases the AGVC service associated with wholesale DSL.

2.3 Domestic Backhaul Costs

Table 3 shows the median cost of domestic backhaul reported by Australian respondents to the study, on a per-customer, per-month basis and a per-Mbps, per month basis.

Table 3. — Median Domestic Backhaul Costs: Australian ISPs

	Domestic Backhaul Cost per Customer per Month- Unbundled Services (AUD)	Average Buy Price: Domestic Backhaul Cost per Mbps per Month (AUD)
Median Australian ISPs	$5.52	$39.33

Market Clarity notes that Australian ISPs are the beneficiaries of a highly contested domestic backhaul market, at least in major centres. They are able to acquire services from a number of providers, including infrastructure owners and

wholesale aggregators, all the way up to dark fibre services (where this is available).

The price per Mbps backhaul prices reported by study respondents represents their average buy price across all backhaul links. This would include bandwidth purchases at a variety of capacities and distances, and in some cases the value of dark fibre links based on the capacity provisioned across these links.

The relationship between the per-customer monthly cost and the average capacity buy price is indicative of the respondents' provisioning policies, location and distance of backhaul purchases, purchase volume, and wholesale backhaul costs.

Based on Market Clarity's experience in conducting benchmarks for private Australian customers, we believe the data expressed in Table 3 is a reasonable reflection of the Australian market.

2.4 IP Transit Costs

Table 4 shows the median cost of IP Transit as reported by respondents to this study, on a per-customer, per month basis, and as a per-Mbps, per month buy price.

Table 4. — Median IP Transit Costs: Australian ISPs

IP Transit (Domestic and International)	IP Transit Cost per Customer - Unbundled Services (AUD)	Average Buy Price: IP Transit Cost per Mbps (AUD)
Median Australian ISPs	$5.11	$45.00

Market Clarity notes that the average buy price cited by Australian respondents is in line with other benchmarks we have conducted on a confidential basis.

As with domestic backhaul, the per-customer price is indicative of the provisioning policies of respondents, relative to customer numbers and traffic. Market Clarity would note that Tier 1/2 providers, large enough to be participants in the international cable market (Telstra, Optus, and TPG) or to acquire IRUs on international circuits (for example, iiNet/Internode), are likely to have different approaches to provisioning international services than many Tier 2/3 respondents to this study.

2.5 Overall Network Expenditure

Table 5 presents the median total expenditure by Australian respondents on network costs (network access, backhaul and IP Transit), on a per-customer, per-month basis.

Table 5. — Median Overall Network Expenditure Australian ISPs

Overall Network Expenditure	Overall Total Network Expenditure, per Customer, per Month (AUD)
Median Australian ISPs	$37.54

Market Clarity believes the highly contested nature of the Australian market restricts ISPs' profit margins. We note that the median ARPU reported by respondents to this study is $AU50.95 per month, meaning that all other costs (including business administration and customer support, for example) have to be met out of a margin of around $AU13 per month.

2.6 Profit Margin After Network Costs

Table 6 shows the median profit margin remaining to Australian respondents to this study, after network costs (network access, domestic backhaul, and IP Transit) are taken into account. This calculation is based on ARPU (average revenue per user) as reported by respondents.

Note that this calculation does not take into account non-network costs, nor costs that are reported below-the-line and not applied to individual services offered by respondents.

Table 6. — Median Profit Margins on All Network Costs (Access, Backhaul, IP Transit): Australian ISPs

Profit Margin – Network Costs (Access, Backhaul, IP Transit)	Profit Margin - Network Access Costs Only (%)	Profit Margin – All Network Costs (%)
Median Australian ISPs	46.1%	26.3%

Keeping in mind that the above table refers only to median profit margins based on network costs subtracted from ARPU, Market Clarity would observe that many ISPs in Australia appear to operate their broadband services on razor-thin, single digit margins. This appears to be a consequence of a highly contested, competitive industry.

Network access costs — either for services provided directly by Telstra or at arm's length via another wholesaler — leave providers with a median profit margin of 46.1%. At the median, just over 27.4% of total network cost ($10.27 of $37.54) is spent on the combination of domestic backhaul and IP Transit.

Market Clarity observes that the recent ACCC decision regarding wholesale ADSL services will change the proportion of income spent on network costs, as it flows through to service providers.

2.7 Network Capacity

Network contention is not a straightforward issue. The impact on customers of different contention ratios will be influenced by the types of traffic traversing the network, customer behaviour, and the provider's traffic management strategy, as well as where the contention occurs.

For example, a provider may provision its domestic backhaul in such a way as to avoid contention between customer access and its own infrastructure, but it is extremely unlikely to provision its international IP Transit on a 1:1 basis (that is, one unit of international traffic for each unit of customer capacity sold).

Nonetheless, it will be able to minimise the impact of international contention by implementing local content caching, peering, and by forming relationships with CDNs (content distribution networks) with a presence in Australia.

However, since contention calculations form part of how providers will provision services under the NBN, Market Clarity believes this remains a relevant metric. With an NBN service, ISPs will need to consider contention with respect to NBN Connectivity Virtual Circuits [CVCs], domestic backhaul from each NBN POI, and IP Transit.

The contention decisions made by individual providers will directly impact the end-user service costs and profitability of services delivered under the NBN, as well as the overall end-user experience.

Where not directly reported, Market Clarity used the information provided by respondents to estimate the aggregate capacity providers appear to have provisioned on a per-customer basis.

Based on our discussions with Australian ISPs who provided us with their end-user capacity allocations, and our estimates of capacity allocations based on reported contention ratios and typical line rates in Australia, Market Clarity estimates a median bandwidth allocation of 161 Kbps per customer.

We note that per customer bandwidth allocations will vary in different parts of an ISPs network, for instance, 161 Kbps per customer may be allocated to domestic backhaul, and a lower amount for IP Transit.

2.8 Non-Network Cost Items

In many cases, respondents stated that non-network cost items were accounted for on a company-wide basis, rather than being associated with individual products or services.

The most notable exception in the Australian sample was for customer support. The median customer support cost for Australian ISPs was $4.50 per customer, per month.

3 New Zealand ISP Costs

In this section, Market Clarity presents the results of its analysis of the costs borne by New Zealand retail ISPs delivering residential ADSL broadband services.

3.1 Distribution of New Zealand ISPs' Network Expenditure

Table 7. — Median Network Expenditure Distribution: New Zealand ISPs

	Network Access - % of Total Network Expenditure	Domestic Backhaul - % of Total Network Expenditure	IP Transit - % of Total Network Expenditure
Median NZ ISPs	75.0%	6.7%	16.2%

As noted previously, the network expenditure distributions shown in the above table, reflecting industry median expenditure in each category, do not add up to 100%. (Refer to Section 2.1, for a more detailed discussion.)

Interestingly, in New Zealand, IP Transit service costs represent a higher proportion of network expenditure than domestic backhaul, whereas in Australia, domestic backhaul expenditure is slightly higher than IP Transit service expenditure. This may be partially explained by the difference in landmass between the two countries; with a higher expenditure on domestic backhaul required to cover the much larger Australian landmass.

We will discuss the comparison between Australia and New Zealand in further detail in Section 4.

3.2 Network Access Costs

Table 8 reports the median network access costs reported by New Zealand respondents to the study.

Table 8. — Median Network Access Costs: New Zealand ISPs

Network Access Cost	Per Customer, Per Month (NZD)
Median NZ ISPs	$25.00

As with the Australian industry, values above and below this median would reflect the different purchases required for on-network and off-network customers, as well as the geographic distribution (urban and non-urban) of an ISP's customer base.

3.3 Backhaul Costs

Table 9 shows the median cost of domestic backhaul as reported by New Zealand respondents to this study, on a per-customer, per-month basis. Insufficient data was reported to provide an analysis of domestic backhaul on a per-Mbps, per month basis.

Table 9. — Median Domestic Backhaul Costs: New Zealand ISPs

	Domestic Backhaul Cost per Customer per Month- Unbundled Services (NZD)
Median New Zealand ISPs	$2.25

The domestic backhaul costs reported above are lower than reported by Australian respondents on a per-customer basis. This reflects a combination of different market structure, different price structure, and different provisioning decisions by NZ respondents to this study.

Market Clarity notes that the lower cost per customer of domestic backhaul in New Zealand versus Australia, may be partially explained by the difference in landmass between the two countries; with a higher expenditure on domestic backhaul required to cover the much larger Australian landmass.

Some respondents to the study noted an ability to "re-use" bandwidth capacity for residential customers, which during business hours is occupied by business traffic. Since Market Clarity has focused only on residential costs, these figures are impacted by the proportion of bandwidth costs allocated to business and residential customers: the same cost being split between two distinct customer bases. This will, to some degree, suppress the domestic backhaul costs reported in this study.

Such practices will exist in Australia, but were not reported by any of the respondents to this study.

3.4 IP Transit Costs

Table 10 shows the median cost of IP Transit reported by New Zealand respondents to this study, on a per-customer, per-month basis. Insufficient data was reported to provide an analysis of IP Transit on a per-Mbps, per month basis.

Table 10. — Median IP Transit Costs: New Zealand ISPs

IP Transit (Domestic and International)	IP Transit Cost per Customer - Unbundled Services (NZD)
Median New Zealand ISPs	$5.40

As with domestic backhaul, the per-customer price is indicative of the provisioning policies of respondents, relative to customer numbers and traffic. Market Clarity notes that Tier 1/2 providers, large enough to be participants in the international cable market (Telecom New Zealand and Telstra Clear) or to

acquire IRUs on international circuits (for example, Vodafone New Zealand), are likely to have different approaches to provisioning international services than many Tier 2/3 respondents to this study.

As is discussed in Section 4, the per-customer cost of IP Transit in New Zealand appears to be lower than in Australia. This may reflect differences in both market structure and provisioning policies.

Unfortunately, Market Clarity lacks separate benchmark data for New Zealand against which this can be tested.

3.5 Overall Network Expenditure

Table 11 shows the median total network expenditure (network access, backhaul and IP Transit) reported by New Zealand respondents to this study, on a per-customer, per month basis.

Table 11. — Median Overall Network Expenditure (Access, Backhaul and IP Transit): New Zealand ISPs

Overall Network Expenditure	Overall Total Network Expenditure, per Customer, per Month (NZD)
Median New Zealand ISPs	$33.50

While network costs are lower than reported by Australian respondents, Market Clarity also notes that at $NZ58.75, ARPU for unbundled residential ADSL services is also lower than in Australia.

3.6 Profit Margin After Network Costs

Table 12 summarises the median profit margins reported by New Zealand respondents, after network access costs are taken into account. This calculation is based on ARPU (average revenue per user) as reported by respondents.

We note that this calculation does not take into account non-network costs, nor costs that are reported below-the-line and not applied to individual services offered by respondents.

Table 12. — Median Profit Margins on All Network Costs (Access, Backhaul, IP Transit): New Zealand ISPs

Profit Margin –Network Costs (Access, Backhaul, IP Transit)	Profit Margin - Network Access Costs Only (%)	Profit Margin – All Network Costs (%)
Median NZ ISPs	54.0%	38.8%

In Sections 4.4 and 4.8, we provide a more detailed comparison of Tier 2/3 ISP profit margins in Australia and New Zealand.

3.7 Network Capacity

New Zealand respondents were more willing to discuss issues of network capacity than were Australian respondents. The most common observation regarding network contention and capacity relates to the purchase of "local handover" (domestic backhaul) from Chorus / Telecom New Zealand.

As is discussed in Section 5, respondents from New Zealand believe provisioning rules for this service are inflexible, and prevent them from offering higher performance (in the form of less-contested backhaul links) to their customers.

Based on our discussions with New Zealand ISPs, of which over 75% provided us with their end-user capacity allocations, and our estimates of capacity allocations based on reported contention ratios and typical line rates in New Zealand, Market Clarity estimates a median bandwidth allocation of 128 Kbps per customer.

We note that per customer bandwidth allocations will vary in different parts of an ISPs network, for instance, 128 Kbps per customer may be allocated to domestic backhaul, and a lower amount for IP Transit.

3.5 Non-Network Costs

All but one of the New Zealand respondents stated that all non-network costs, including customer support, were handled on a company-wide basis and were not associated with individual products or services.

4 Comparison: Australia and New Zealand

4.1 The Challenge

There are significant challenges in presenting a coherent comparison of how costs stack up between Australia and New Zealand. Some of these are discussed below.

4.1.1 Regulatory Regime

ISPs in the two countries work under considerably different regimes with respect to which monopoly services are regulated, the prices applied by the regulator to those monopoly services, and the structure of service prices that are regulated.

Table 13 illustrates some key differences in regulated services.

Table 13. — Network Access Regulation Overview: Australia and New Zealand

Item	Australia	New Zealand	Comment
Unbundled Local Loop (ULL) / Unbundled Copper Local Loop (UCLL) price regulation	Prices regulated according to distance from capital city (bands).	Prices regulated according to urban / non-urban location.	Until recently, Australia had many more pricing bands for ULL prices.
Line Share Service (LSS) price regulation	Single price for LSS access.	Not available.	The New Zealand regulatory environment does not provide for a spectrum sharing service.
Wholesale ADSL service	Prices regulated according to distance from capital city (zones).	Unbundled Bitstream Access (UBA) regulated according to urban / non-urban location; new or existing line; and whether a telephone service (POTS) is included. There are also options for enhanced UBA services.	New Zealand's UBA has more pricing tiers than the Australian wholesale ADSL service.

Item	Australia	New Zealand	Comment
Aggregating Virtual Circuit used with wholesale ADSL (Australia) / UCCL and UBA Backhaul Services (New Zealand)	Single price per Mbps, per month	New Zealand regulation applies to the Unbundled Copper Local Loop Backhaul service (UCLL backhaul) and Unbundled Bitstream Access Backhaul service (UBA backhaul).	Australia's regulation only applies to AGVC services acquired from Telstra. ISPs can seek domestic backhaul from competitive providers. Some transmission service prices are separately regulated. A discussion is beyond the scope of this paper.

Table 14 compares some regulated cost items on a like-for-like basis in each currency (that is, only network access services with a regulated price in both countries are reported).

Table 14. — Selected Regulated Service Prices, Australia and New Zealand

Service	Australian Price in AUD	Australian Price in NZD	New Zealand Price in AUD	New Zealand Price in NZD
Urban and Suburban ULL (Band 1-3)[2] / Urban UCCL[3]	$16.75	$21.52	$15.44	$19.84
Wholesale DSL - Zone 1 (Inner City)[4] / Basic UBA Urban, no POTS[3]	$25.40	$32.64	$32.14	$41.30
Wholesale DSL - Zone 2/3 (Suburban)[4] / UBA Non-Urban, no POTS[3]	$30.80	$39.58	$45.12	$58.09

[2] ACCC finalises fixed line telecommunications prices and delivers pricing certainty and stability to industry, http://www.accc.gov.au/content/index.phtml/itemId/998524/fromItemId/142, 21 July 2011

[3] Final decision in relation to the review of the UCLL, UBA and Sub-loop Services standard terms determinations (STDs) for the purpose of implementing clause 4A of the Telecommunications Amendment Act 2011, http://www.comcom.govt.nz/assets/Telecommunications/STD/UCLL/Averaging-and-benchmarking-reviews/Final-UCLL-Averaging-Decision/Final-UCLL-UBA-and-Sub-loop-STD-Decision-24-November-2011.pdf, 24 November 2011.

[4] ACCC declares wholesale ADSL, commences related processes, http://www.accc.gov.au/content/index.phtml/itemId/1032878/fromItemId/142, 14 February 2012

As can be seen in Table 14, while the cost of Australian wholesale DSL services are lower than the New Zealand counterparts, New Zealand access prices are less expensive than similar services in Australia. However, the Australian retailer buying a wholesale DSL service would also need to include the per-customer cost of an aggregated virtual circuit (AGVC), and in New Zealand, UCCL or UBA backhaul prices would also apply. Due to the various pricing options available in New Zealand, and the impact of ISP backhaul provisioning decisions, this component is not shown in this Australia-NZ comparison table.

4.1.2 Competitive Infrastructure

In both Australia and New Zealand, competitive fibre infrastructure is available in major cities. In Australia, the greatest competition is experienced in Sydney, Brisbane, and Melbourne, with competitive providers also present in smaller numbers in Adelaide, Perth, and the Gold Coast.

Australia also has a number of providers offering inter-capital fibre services with moderate regional coverage. Competition exists along most of the East Coast, as well as between the East Coast and Perth. Tasmania has only one fibre competitor (Basslink) providing non-Telstra transmission services connecting Tasmania to the mainland. The Regional Backhaul Blackspots Program fibre (funded by the Federal Government) has also boosted regional competition for fibre services.

It appears to Market Clarity that while competitive fibre exists in Auckland, regional competition to the incumbent (Chorus, formerly TNZ) remains limited.

Under New Zealand's government broadband program, networks are now under construction under the purview of Crown Fibre Holdings, and agreements are in place with Northpower, Enable and WEL Networks[5].

4.1.3 Incumbent Non-Price Terms and Conditions

The non-price terms and conditions under which incumbents in the two countries supply wholesale services for ADSL indirectly impact the costs of those services. For example, if a provider uses a strict Kbps/customer provisioning formula for providing domestic backhaul, it may result in lower per-customer monthly costs to the provider, while at the same time limiting a retailer's ability to offer higher price (and therefore higher profit) services.

This is discussed in greater detail in Section 5.

4.1.4 Customer Behaviour

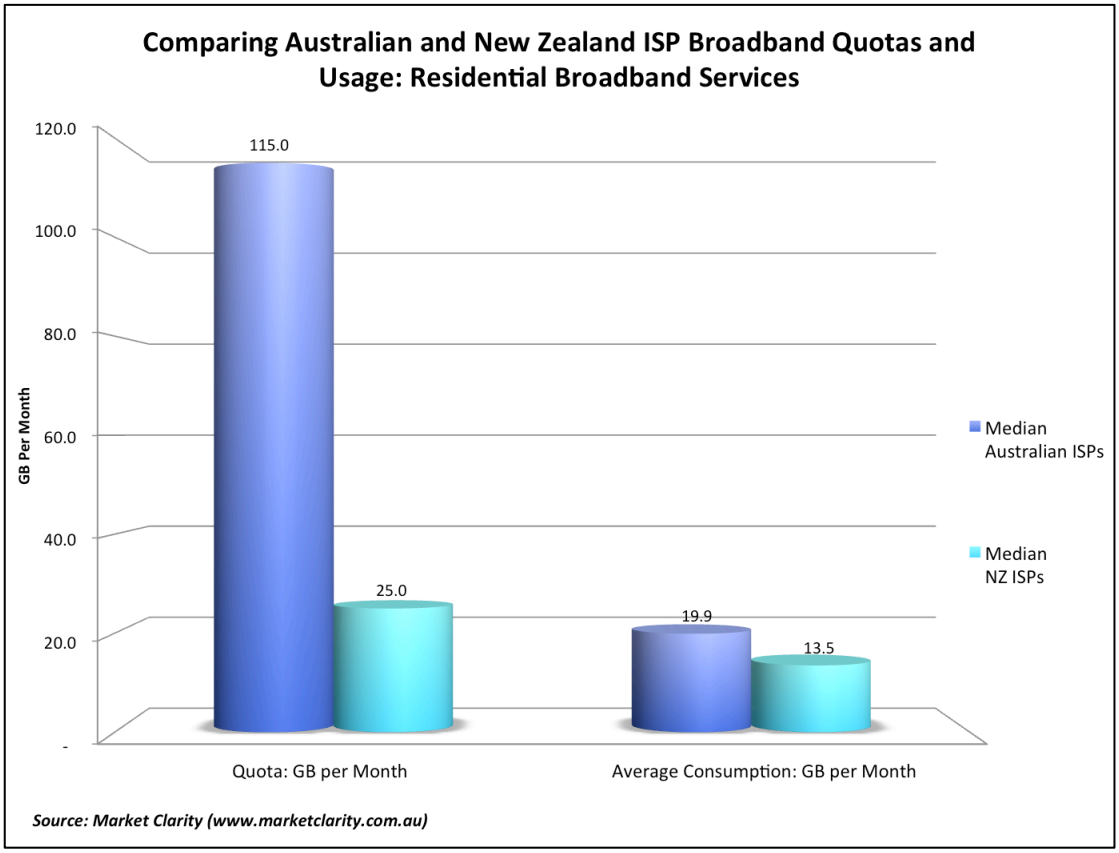
An ISP's underlying costs are also a function of the volumes of data (a) made available to customers; and (b) typically consumed by customers.

As Market Clarity has noted in a previous study, ***Broadband Download Behaviour in Australia***[6], broadband customers, taken as a whole, typically

[5] See: http://www.crownfibre.govt.nz/crown-partners/agreements-with-ufb-partners/

download far less data than is available to them. Greater downloads impose greater costs on ISPs, and as is shown in Figure 3, Australian customers are offered larger plans, and consume more capacity, than New Zealanders.

Figure 3. — Comparing Australian and New Zealand ISP Broadband Quotas and Usage: Residential Broadband Services



It should be noted that in Figure 3, respondents from Australia and New Zealand were identifying the plans most commonly purchased by their customers. The largest-quota plans in both countries are considerably greater than is reported here.

While Australians are noticeably gravitating to higher-capacity plans (above 100 GB per month), New Zealand customers still favour plans at 25 GB per month.

The median typical usage reported by Australian respondents, at 19.9 GB per month, is 32.2% higher than the median typical usage reported by New Zealand respondents, at 13.5 GB per month.

Market Clarity notes that the Australian usage reported by respondents to this study agrees strongly with other measures. For example, the Australian Bureau of Statistics' *Internet Activity, Australia* for December 2011[7] suggests a fixed line broadband usage of 19.07 GB per user, per month.

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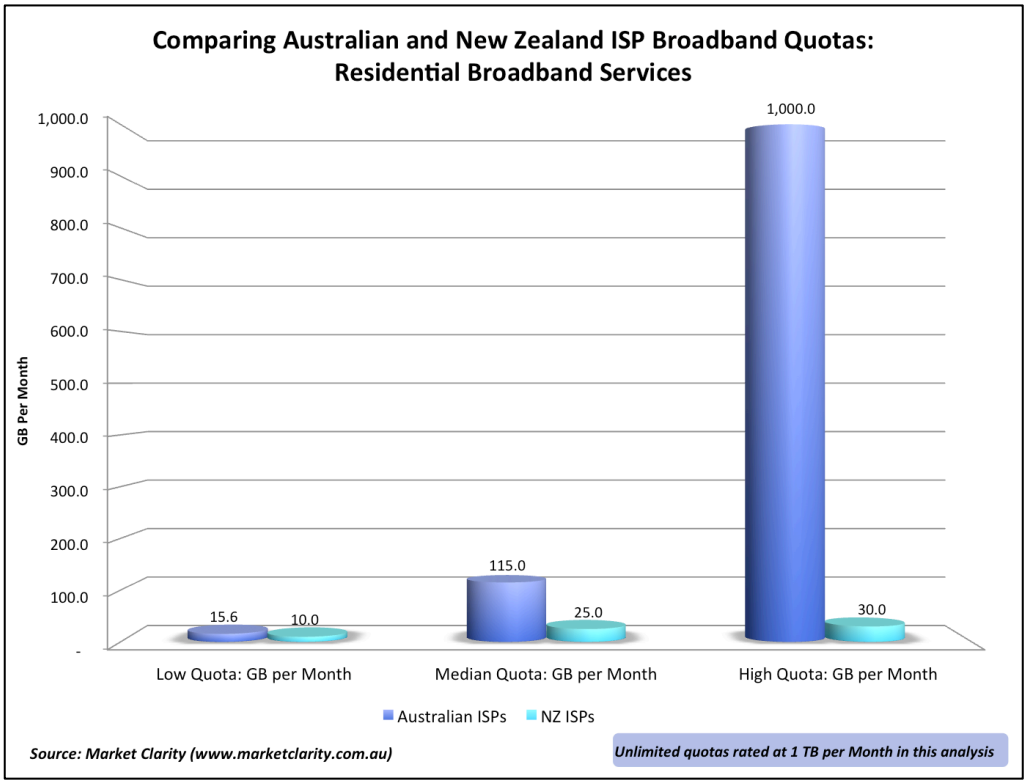
6 See: http://www.marketclarity.com.au/freebies/

7 See: http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/8153.0Chapter7Dec%202011 and http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/8153.0Chapter3Dec%202011

Figure 4 shows the difference in the bottom-top "spread" of the average end-user broadband quotas reported by Australian and New Zealand respondents.

Figure 4. — Comparing Australian and New Zealand ISP Broadband Quotas: Residential Broadband Services



The much smaller range of average end-user broadband quotas reported by New Zealand respondents, in comparison to respondents in Australia, suggests to Market Clarity that market constraints exist in New Zealand which do not prevail in Australia. As a result, respondents from New Zealand appear to have less opportunity to use high-quota plans as a differentiator, compared to their Australian counterparts.

4.2 Bandwidth Available to End Users

"Contention ratio" — the ratio of the plan speed purchased by end users to the aggregate capacity of an ISP's network — has fallen out of favour in recent years.

This is primarily because, in Australia, the part of the network most likely to suffer high contention ratio — the link from the DSLAM back to the ISP's own infrastructure — has been the beneficiary of continued capital city investment in fibre networks, the increasing availability of competitive regional fibre links, and the resulting dark fibre services market.

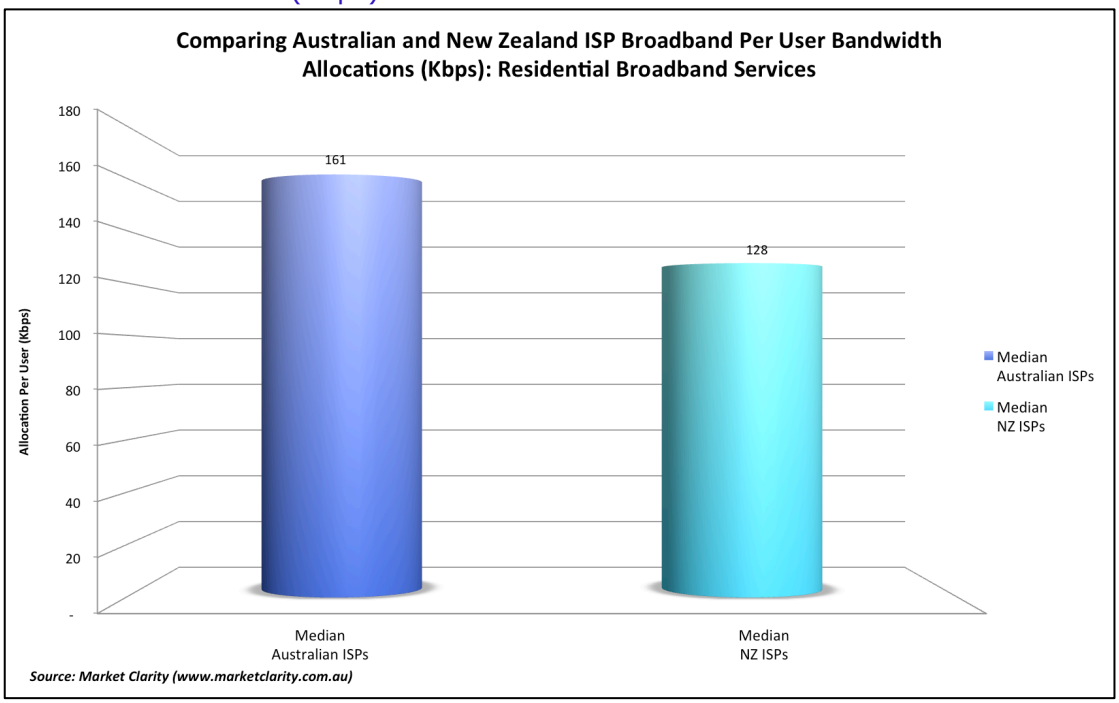
As a result, a number of ISPs have asserted to Market Clarity that at this level, their networks are designed to avoid contention.

However, taken as a whole, contention will exist somewhere in the path between a user and content. The user may be in a regional location, forcing the ISP to

trade off the cost of long-distance backhaul with the performance users will find acceptable; and all providers will provision international connectivity with a view to a cost-performance trade-off.

With this in mind, Market Clarity has performed a calculation based on the capacity information respondents provided about their networks and reported per-user bandwidth allocations, to offer a comparison between Australia and New Zealand based on the overall Internet capacity available to broadband end users. This is illustrated in Figure 5.

Figure 5. — Comparing Australian and New Zealand ISP Broadband Per User Bandwidth Allocation (Kbps): Residential Broadband Services



Perhaps surprisingly, given the difference in quota usage between the two countries, the difference in estimated per-user capacity allocations between Australia and New Zealand is 21%. At peak traffic times, the users of Australian respondents have a median 161 Kbps available to them, while users of New Zealand respondents have a median 128 Kbps available.

It is, however, important to note that this does not necessarily equate to under-performing ISPs. Market Clarity notes a significant difference between the allowances calculated above, and reported typical line speeds in the two countries.

According to the New Zealand Commerce Commission[8], the typical web browsing achieved by residential broadband subscribers was around 4 Mbps at the end of 2010. This can only be considered to have a weak relationship to users' line speeds, however, since web browsing is affected by end-to-end factors such as web server capacity, and the speed of all intermediary links. It is, however, in

[8] NZ Commerce Commission - Broadband Performance: Key Findings For Period July To December 2010 (published July 2011), http://www.comcom.govt.nz/broadband-reports/

broad agreement with other measures, such as the current 3.7 Mbps speed for New Zealand users reported by Akamai in its latest *State of the Internet*[9] report.

Market Clarity's private research suggests that Australians enjoy line speeds (e.g. copper line speed) more typically near 12 Mbps. This corresponds to research published by iiNet and Internode in 2011, showing that 50% of their customers had a line speed of 11.9 Mbps[10].

However, as noted in various international download speed studies, the line speed is rarely achieved when downloading content. Hence, for example, Akamai's *State of the Internet*[9] report at the time of writing attributes an average connection speed of 4.9 Mbps for Australian users, and 3.7 Mbps for New Zealand users.

In New Zealand, some respondents noted that they have less freedom to make provisioning decisions about domestic backhaul, being subject to provisioning rules of products acquired from the incumbent. This is reported in more detail in Section 5.

4.3 ARPU

There is a feedback loop between the capacity notionally available to an end-user, and the ISP's network costs. Increasing the capacity available to end-users increases the underlying network costs; it also encourages more downloads. On the other hand, better network performance can be used to create a marketing position for high-quality services. This relationship is suggested by the ARPU reported from ISPs in the two countries.

Table 15 summarises ARPU reported by respondents to this study.

Table 15. — Bundled and Unbundled ARPU in Australia and New Zealand: Residential Broadband Services

Average Revenue per User (ARPU) in Australia and New Zealand	Unbundled ARPU (AUD)	Bundled ARPU (AUD)	Unbundled ARPU (NZD)	Bundled ARPU (NZD)
Median Australian ISPs	$50.95	$67.33	$65.47	$86.52
Median NZ ISPs	$45.72	$68.09	$58.75	$87.50

ARPU information is shown in Figure 6 in Australian dollars, and in Figure 7 in NZ dollars.

[9] See: http://www.akamai.com/stateoftheinternet/

[10] See: http://www.internode.on.net/residential/adsl_broadband/easy_broadband/syd-heatmap/

Figure 6. — Comparing Australian and New Zealand ISP Bundled and Unbundled ARPU: Residential Broadband Services (AUD)

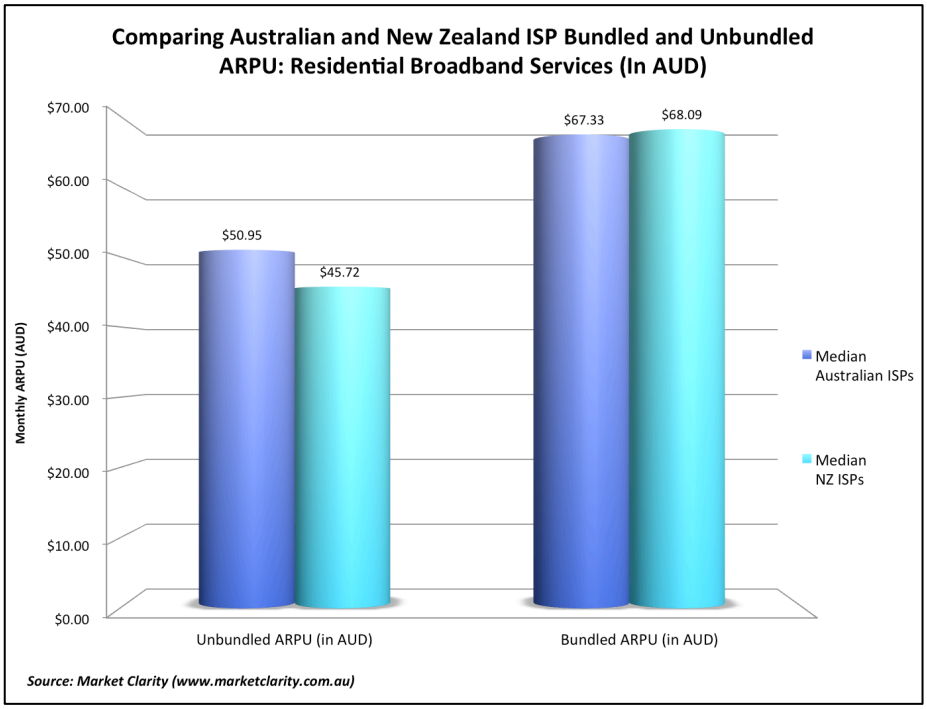
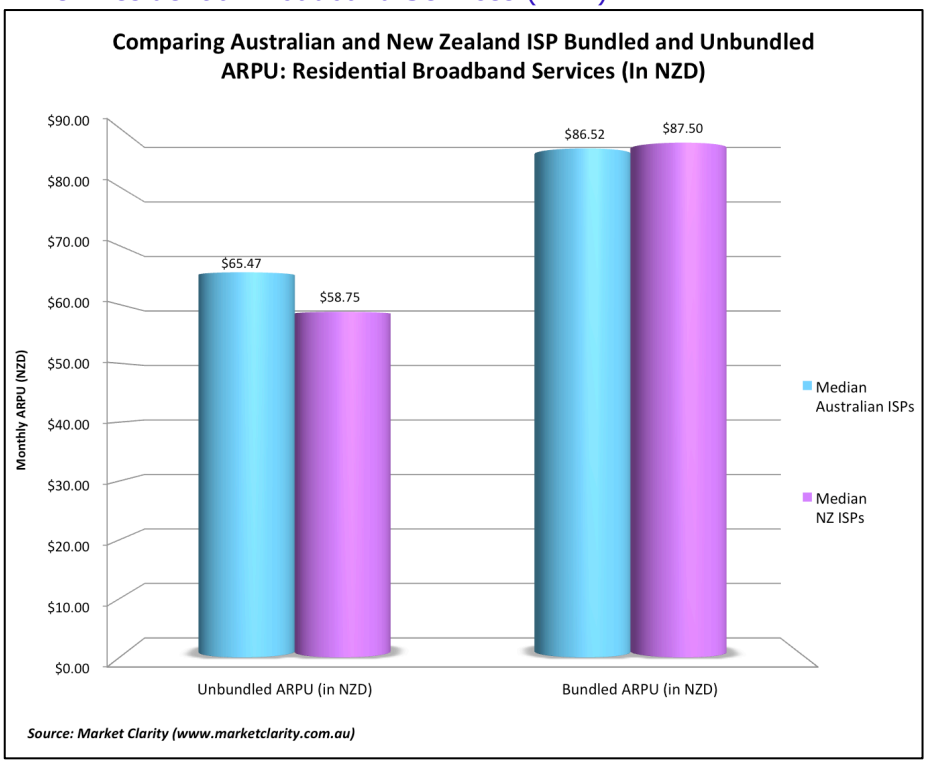


Figure 7. — Comparing Australian and New Zealand ISP Bundled and Unbundled ARPU: Residential Broadband Services (NZD)



4.4 Network Access Costs

Network access costs for each country comprise the combination of their regulated access costs (see Tables 13 and 14), and other costs which may be unregulated (carriage via a competitive fibre network, wholesale ADSL from a non-incumbent).

Access costs for each country are compared in Table 16, and are illustrated in Figures 8 and 9, below.

Table 16. — Comparing Network Access Costs: Australian and New Zealand ISPs — Residential Broadband Services

Network Access Cost	Per Customer, Per Month (AUD)	Per Customer, Per Month (NZD)
Median Australian ISPs	$28.69	$36.86
Median New Zealand ISPs	$19.46	$25.00

Because of the different regulatory regimes that apply, New Zealand ISPs enjoy lower costs for the access component of their networks.

Figures 8 and 9 compare profit margins in Australia and New Zealand, after network access costs are taken into account. Profit margins were calculated by examining each ISP's monthly network access expenditure as compared to their monthly ARPU for unbundled services. We note that these figures reflect network access costs only, and as such do not account for ISP expenditure on other items such as domestic backhaul, IP Transit, customer support, customer acquisition, and other operational costs.

Figure 8. — Comparing Australian and New Zealand Monthly Network Access Costs and Profit: Residential Broadband Services (AUD)

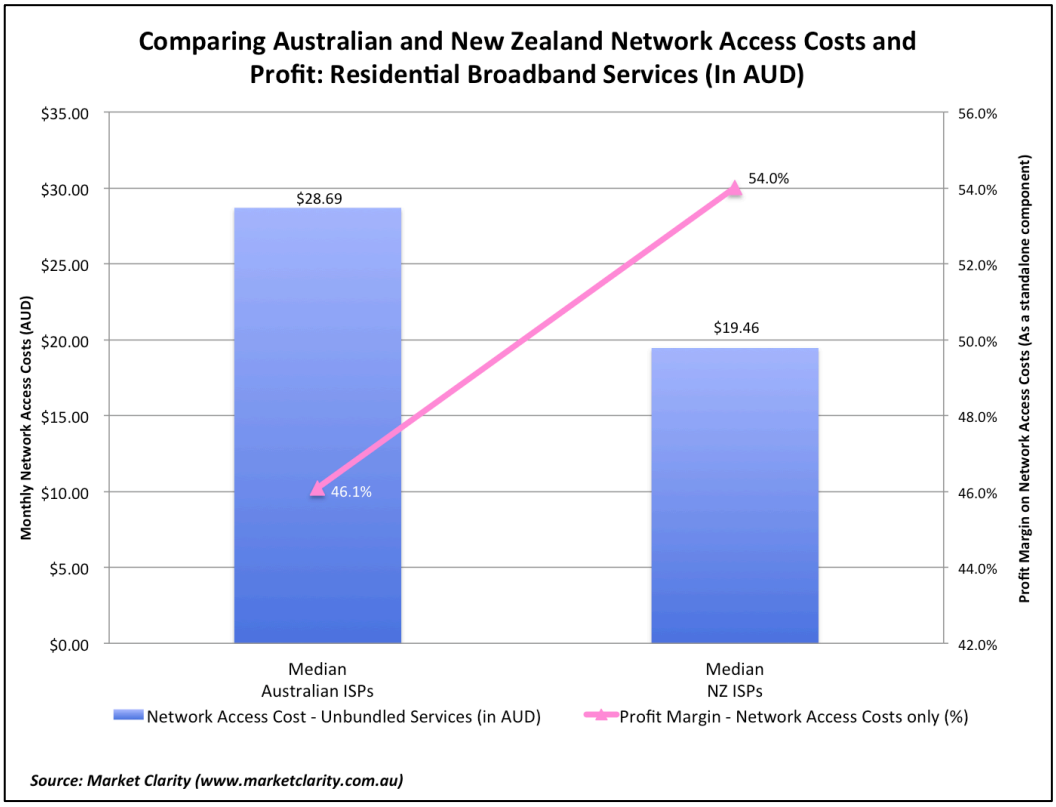
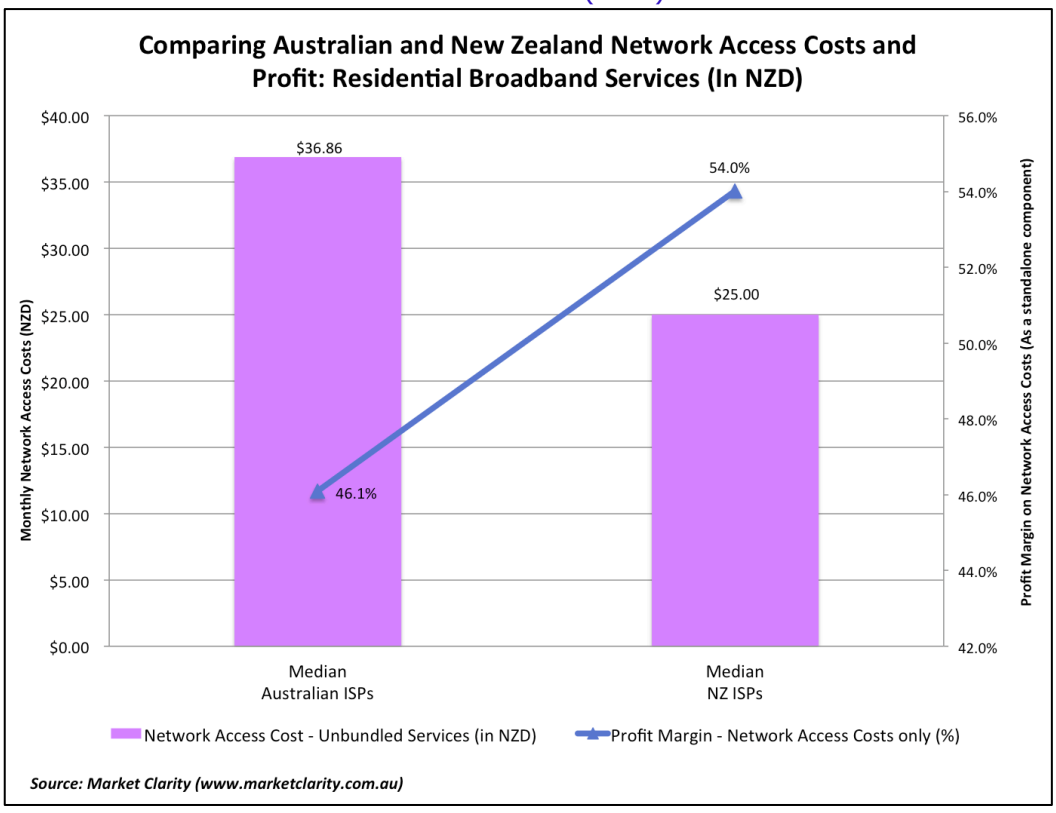


Figure 9. — Comparing Australian and New Zealand Monthly Network Access Costs and Profit: Residential Broadband Services (NZD)



4.5 Domestic Backhaul Costs

As previously noted, Australia has a more contested market for domestic backhaul, at least in capital cities. This is, however, offset by greater distances. As a result, on a per-user basis, New Zealand ISPs appear to pay less for domestic backhaul than in Australia, as illustrated in Figures 10 and 11, below (in Australian and New Zealand dollars, respectively).

A comparison of monthly domestic backhaul cost per customer in Australia and New Zealand is presented in Table 17, in both currencies.

Table 17. — Comparing Domestic Backhaul Costs: Australian and New Zealand ISPs — Residential Broadband Services

Domestic Backhaul Cost	Domestic Backhaul Cost per Customer, per Month - Unbundled Services (AUD)	Domestic Backhaul Cost per Customer, per Month - Unbundled Services (NZD)
Median Australian ISPs	$5.52	$7.10
Median New Zealand ISPs	$1.75	$2.25

These are illustrated in Figures 10 and 11, in Australian and New Zealand dollars respectively.

Figure 10. — Comparing Australian and New Zealand Network Backhaul Costs — Per User Per Month: Residential Broadband Services (AUD)

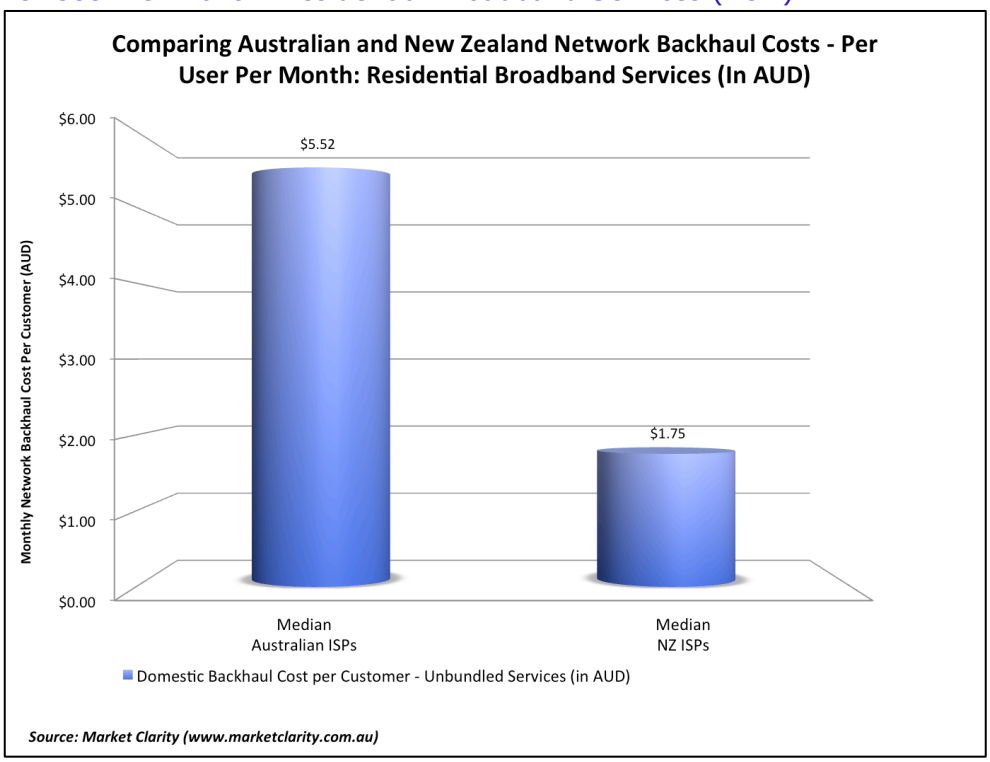
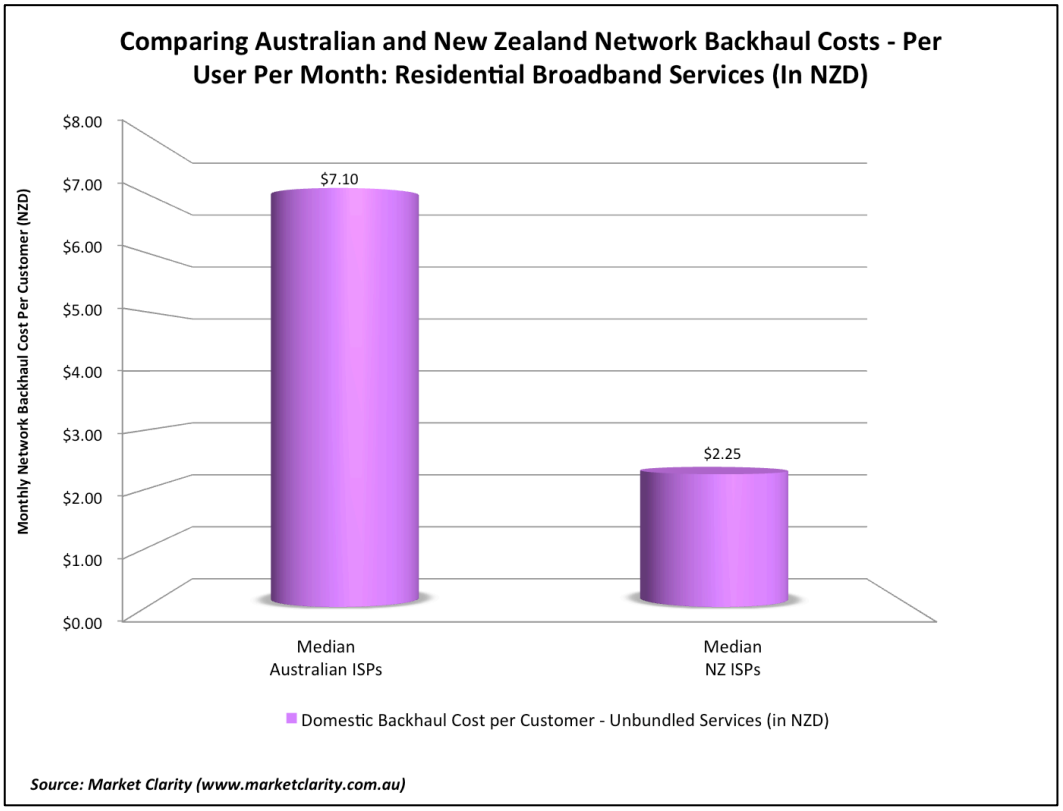


Figure 11. — Comparing Australian and New Zealand Network Backhaul Costs — Per User Per Month: Residential Broadband Services (NZD)



Market Clarity notes the reluctance of New Zealand ISPs to disclose the actual purchase price for backhaul services. Hence, there were insufficient samples in New Zealand to present domestic backhaul prices on a per-Mbps, per-month basis. As a result, the lower domestic backhaul expenditure may represent:

- Lower raw costs for domestic backhaul;
- Lower domestic capacity purchased to support customers; or
- A mixture of both of these factors.

Perhaps due to the smaller landmass of New Zealand as compared to Australia, ISPs in New Zealand allocate far less of their network expenditure to domestic backhaul. However, Market Clarity also notes that this spending may be strongly influenced by the non-price terms and conditions of the incumbent offering these services. This may result in ISPs spending less on domestic backhaul than would be their own preference.

Market Clarity also observes that this lower expenditure by New Zealand ISPs on backhaul is made out of a lower ARPU.

4.6 IP Transit Costs

Table 18 compares the monthly cost per customer of IP Transit in Australia and New Zealand (in each currency).

Table 18. — Comparing IP Transit Costs: Australian and New Zealand ISPs — Residential Broadband Services

IP Transit Cost	IP Transit Cost per Customer, per Month - Unbundled Services (AUD)	IP Transit Cost per Customer, per Month - Unbundled Services (NZD)
Median Australian ISPs	$5.11	$6.57
Median New Zealand ISPs	$4.20	$5.40

IP Transit cost per user, per month is illustrated in Figures 12 and 13, in Australian and New Zealand dollars respectively.

Figure 12. — Comparing Australian and New Zealand ISPs IP Transit Expenditure — Per User Per Month: Residential Broadband Services (AUD)

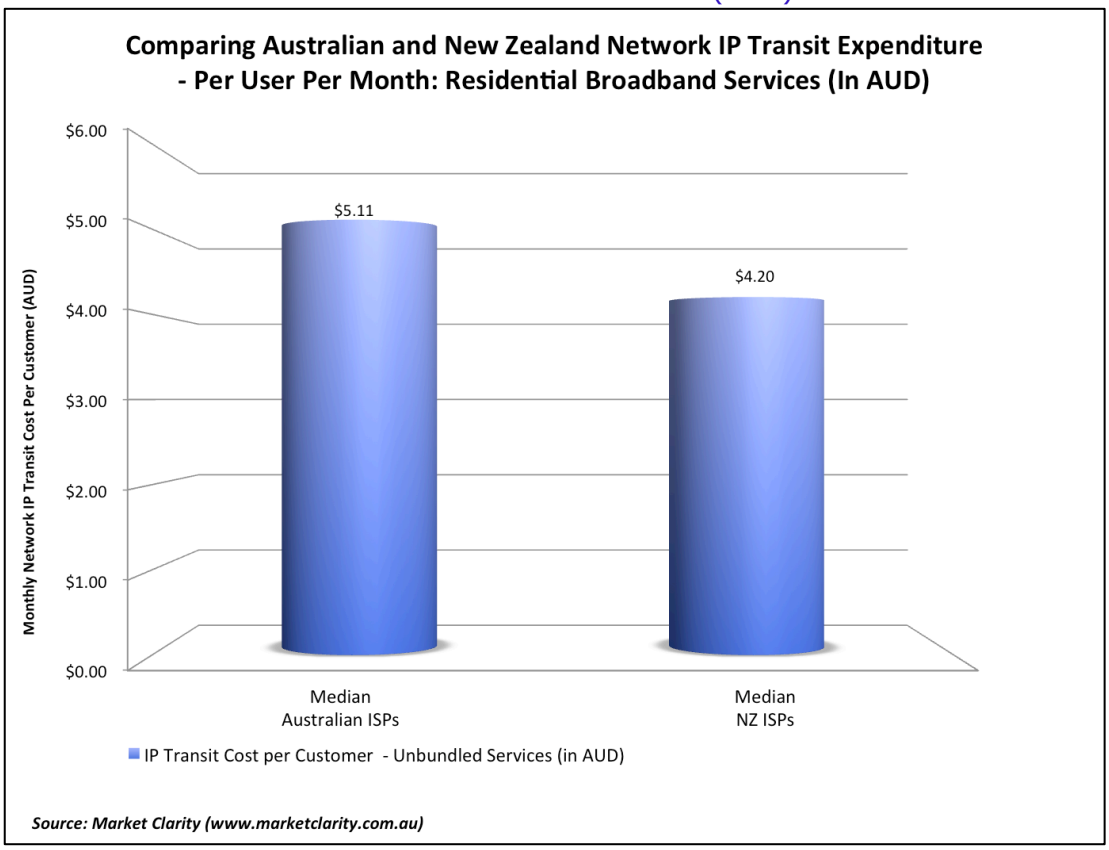
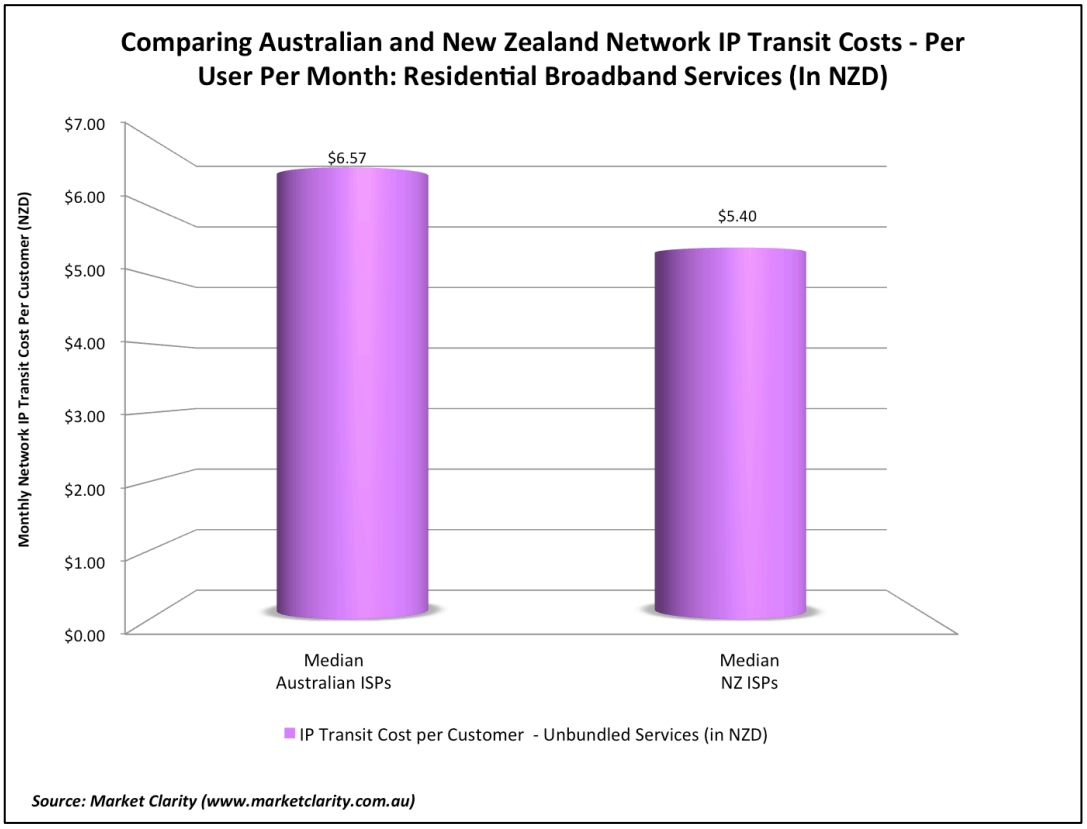


Figure 13. — Comparing Australian and New Zealand ISPs IP Transit Expenditure — Per User Per Month: Residential Broadband Services (NZD)



On a per-customer basis, in both currencies, ISPs in New Zealand spend less on IP Transit than their counterparts in Australia. Whether this reflects constraints imposed by the cost of IP Transit or, alternatively, other factors (such as amount of domestic backhaul purchased), New Zealand ISPs spend less on IP Transit capacity purchases (on a per customer basis), than their counterparts in Australia.

This may reflect a higher wholesale price for IP Transit on a per-Mbps, per-month basis; alternatively it may also reflect business decisions made by New Zealand ISPs.

Further investigation into this issue would require a comprehensive benchmark of New Zealand per-Mbps, per-month costs. The resistance among New Zealand ISPs to participating in such a benchmark is discussed in Sections 5 and 6.

As with domestic backhaul, Market Clarity notes that this lower expenditure by New Zealand ISPs on is made out of a lower ARPU.

4.7 Overall Network Expenditure

Table 19 presents a consolidated view of key costs for all respondents.

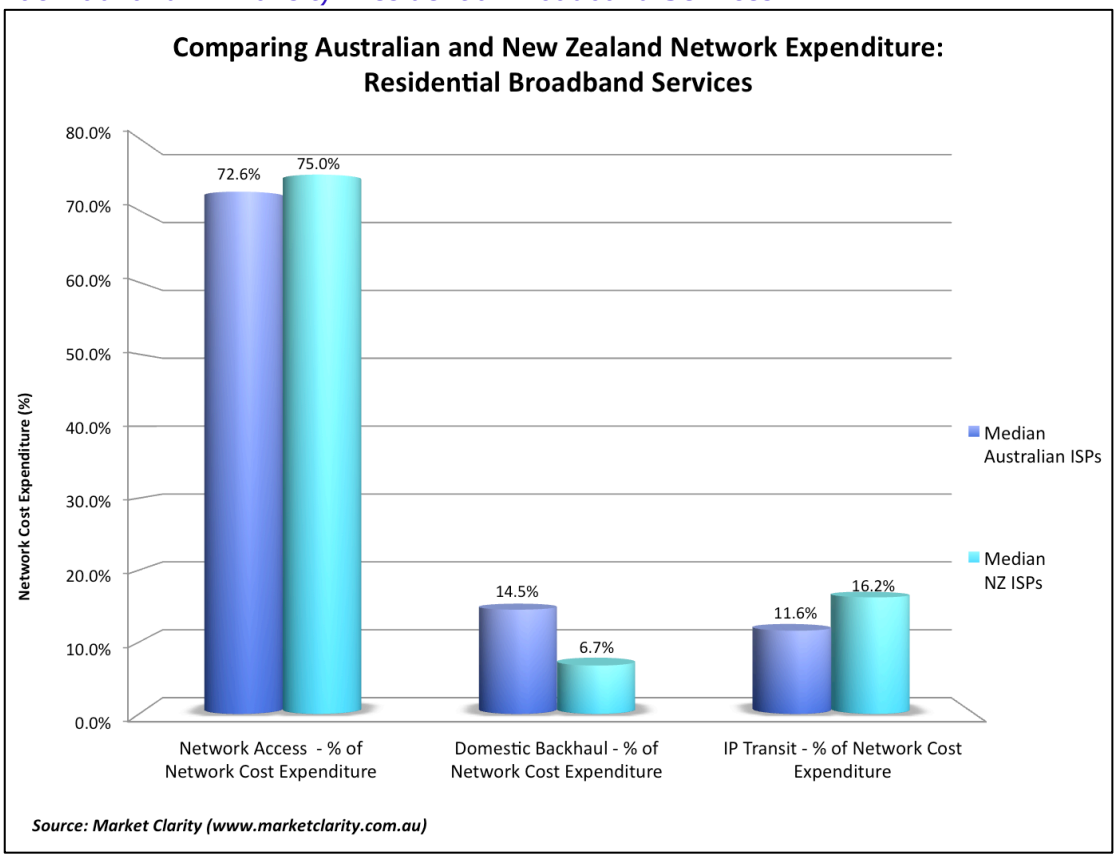
Table 19. — Network Expenditure (Access, Backhaul and IP Transit) Distribution: Comparing Australia and New Zealand (%)

	Network Access - % of Total Network Expenditure	Domestic Backhaul - % of Total Network Expenditure	IP Transit - % of Total Network Expenditure
Median Australian ISPs	72.6%	14.5%	11.6%
Median NZ ISPs	75.0%	6.7%	16.2%

As in Section 2 and Section 3, Market Clarity notes that this table reflects respondent's median expenditure in each category, thus rows may not add up to 100%.

The network expenditure of Australian and New Zealand respondents is compared in Figure 14.

Figure 14. — Comparing Australian and New Zealand Network Expenditure (Access, Backhaul and IP Transit): Residential Broadband Services



In interpreting this Figure, it is important to note that there is a high variation, both within a country's respondent sample and between Australia and New Zealand, in the proportion of on-network and off-network customers.

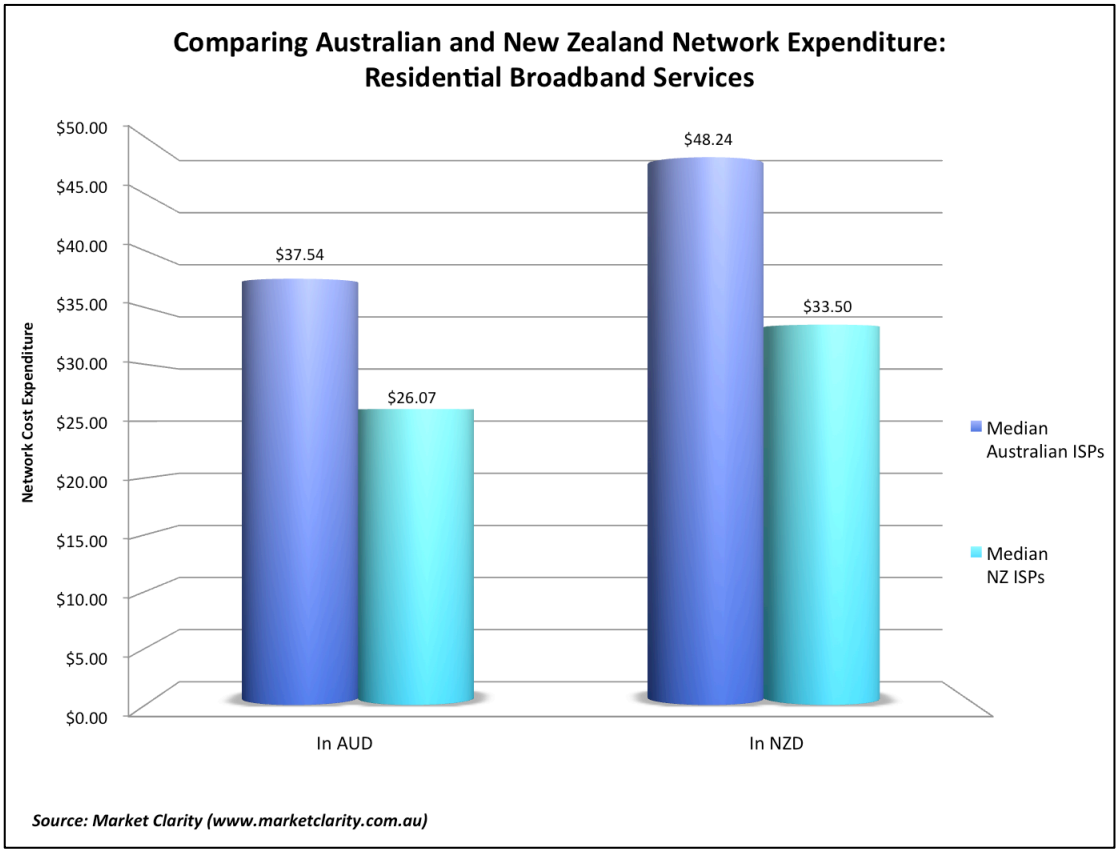
Some respondents to the study were able to report on network access costs such as ULL, UCLL or LSS in response to this item. For others, who do not operate DSLAM infrastructure, network access reflects the purchase of a wholesale ADSL product, which is acquired on a different basis to ULL / UCLL / LSS services.

Australian ISPs devote a greater proportion of their expenditure to domestic backhaul, relative to IP Transit. This may reflect either greater costs associated with Australia's larger size, or a lower absolute cost of IP Transit, or a mix of both.

It is also important to remember, as noted before, the different operation of the domestic backhaul markets in the two countries. Perhaps, for example, with more flexible arrangements for these services (referred to by many New Zealand correspondents as "handover"), New Zealand ISPs would expand their local backhaul and devote a correspondingly greater proportion of their expenditure to this item.

The total network expenditure in the two countries is illustrated in Figure 15.

Figure 15. — Comparing Australian and New Zealand ISPs Network Expenditure (Access, Backhaul and IP Transit) — Per User Per Month: Residential Broadband Services



4.8 Profit Margins After Network Costs

Table 20 compares monthly profit margins in Australia and New Zealand, after network costs are taken into account.

Table 20. — Comparing Australian and New Zealand ISP Profit Margins: Residential Broadband Services

	Profit Margin - Network Access Costs Only: Unbundled Services (%)	Profit Margin - Network Costs Only: Unbundled Services (%)	Profit Margin - All Reported Items: Unbundled Services (%)
Median Australian ISPs	46.1%	26.3%	24.9%
Median NZ ISPs	54.0%	38.8%	30.9%

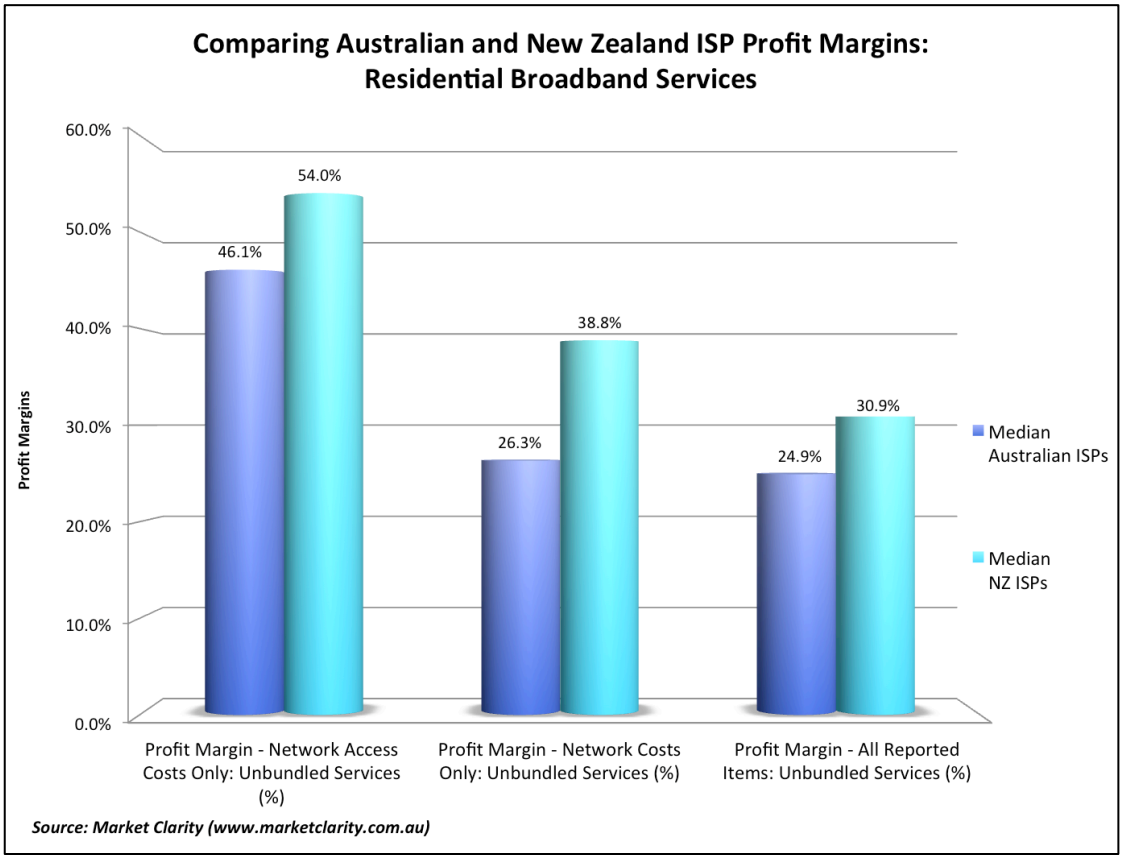
Australian respondents reported profit margins on network access (as a single cost expenditure item) ranging from 41.1% to 66.7%, whereas New Zealand respondents reported profit margins on network access ranging from 15.8% to 60.0%.

Taking into account all network costs (network access, domestic backhaul and IP Transit), Australian respondents reported profit margins on all network costs ranging from 13.7% to 51.1%, whereas New Zealand respondents reported profit margins on all network costs ranging 15.8% to 50.7%.

Overall profit margins were much more difficult to determine, as many respondents only reported on network costs, as other items were not directly tracked on a per product basis. Hence, the total profit margins reported are not a reflection of all product costs.

Figure 16 compares the profit margins available to ISPs in the two countries. As with Table 20, many items are not directly tracked on a per product basis. Hence, the total profit margins reported are not a reflection of all product costs.

Figure 16. — Comparing Australian and New Zealand ISP Profit Margins: Residential Broadband Services



Market Clarity observes that when all reported cost items are taken into account — including non-network costs — New Zealand ISPs still reported higher profit margins than their Australian counterparts.

While Market Clarity is unable to provide full details of non-network cost items without breaching respondent confidentiality, there are several factors that should be considered when interpreting Figure 16, above.

- **Network Dimensioning and Profitability —** Market Clarity believes that ISPs in the two countries are making different decisions about provisioning network capacity.
- **ISP Study Sample —** New Zealand is represented by a smaller number of respondents. In addition, one respondent leverages a business-grade network to offer premium residential services, and may arguably distort the sample.
- **Competition —** While Australia has a much larger population than New Zealand (22 million versus 4.4 million), the number of ISPs is much larger. For example, the Internet Service Providers Association of New Zealand (ISPANZ) in New Zealand has 23 members, while Market Clarity is aware of close to 500 ISPs currently active in Australia.
- **Country Size —** The "tyranny of distance" applies a greater premium to domestic backhaul in Australia than to New Zealand respondents. This is not only associated with regional-to-capital services. Traffic in Perth, for example, needs to travel more than 3,900 km to reach a Sydney data centre. All

broadband customers in New Zealand's two main islands, on the other hand, are within 1,000 Km of Christchurch or Wellington.

- **On-Net versus Off-Net Customer Base —** Profitability in either country will be affected by the relative distribution of an ISP's on-network / off-network customers, since on-network customers are the most profitable. This distribution was not disclosed to Market Clarity.
- **Insufficient Data on New Zealand Raw Purchase Prices for Backhaul and IP Transit Services —** Market Clarity holds considerable benchmark data for wholesale telecommunications services in Australia, but we do not hold similar data for New Zealand. Furthermore, New Zealand study respondents were reluctant to divulge this price data.

Hence, while it is possible that the New Zealand reported profit margins are higher than may be discovered in an industry-wide survey, it may reflect different market conditions in the two countries.

5 Constraints

5.1 Growth Constraints: Australia

Market Clarity asked all respondents to nominate whether there were any factors constraining them from offering greater downloads to their customers, and if so, to nominate those constraints.

In Australia, some of the key constraints reflect provider concern about the NBN. In particular, respondents cited the NBN Co tariff structure, particularly in relation to CVCs (Connectivity Virtual Circuits); and the cost of supporting a large number of Points of Interconnect (POIs).

Apart from the NBN, the other items nominated as constraints by Australian respondents were:

- Domestic backhaul;
- The need to devote capex to multiple technologies;
- Limited access speeds, which in turn constrain customer downloads; and
- Lack of attractive content offerings.

5.1.1 The NBN

Although the purpose of Australia's National Broadband Network is to offer citizens access to a faster network (and thereby, presumably, allow them to download more content), providers raised concerns that the network may become a future constraint.

The current NBN Co pricing model was cited as an issue. In particular, respondents complained about the tiered nature of the CVC pricing construct, which requires service providers to purchase capacity in increasing increments. At lower capacities, CVCs are purchased in 50 Mbps increments. This increases to 100 Mbps capacity increments for bandwidth purchases up to 1 Gbps, then jumps to 1 Gbps purchasing requirements for higher capacity bandwidth purchases.

The impact of the tiered CVC structure is a highly variable wholesale CVC cost structure.

Another key constraint is the NBN Co POI model (imposed, it must be noted, by the Australian Competition and Consumer Commission). As is noted below, this imposes a burdensome connection cost if a provider wants to maintain a national presence.

Finally, some providers fear that by making their own network investments obsolete, the NBN might act as the ultimate growth constraint, sending them out of business.

5.1.2 Domestic Backhaul

As noted in Section 4, Australian ISPs devote a larger portion of their income to buying domestic backhaul. Even with the competition introduced under the Regional Backhaul Blackspots Program, multiple respondents singled out the cost of domestic backhaul as an ongoing concern.

This issue is expected to become more acute as providers seek sufficient backhaul connectivity to the proposed 121 NBN points of interconnect. The only alternatives to obtaining connections to all POIs will be (a) to focus on selected regions only; or (b) to purchase wholesale services from a larger carrier aggregating NBN POI traffic.

5.1.3 Capex on Multiple Technologies

Any technology (including the NBN) that demands capital expenditure from the ISP will, as a consequence, reduce the funds available for increasing the broadband allowances (quotas) that an ISP offers. The strain of spreading capex across multiple technologies will be felt most acutely in NBN areas where ISPs have existing DSL infrastructure, especially during the build period when DSL and NBN technologies service common geographies; e.g. the NBN rollout does not eliminate the need to also service existing DSLAM investments due to NBN coverage limitations.

5.1.4 Access Speeds

As noted earlier, this study has revealed conflicting measures for the network speeds available to consumers — all of them considerably lower than the 24 Mbps notionally available on ADSL2+.

Inadequate access speeds have various outcomes: they form an absolute constraint on the amount a customer can download in a given period of time; that constraint informs the ISP's network provisioning decisions; and finally, a constrained access network makes new rich content services (such as IPTV) less compelling to the customer.

5.1.4 Lack of Attractive Content Offerings

One Australian respondent noted that in addition, service providers are not yet able to access content that is attractive enough to substantially change customers' download behaviours. Access to content is therefore considered an important constraint to increasing users' downloads.

5.2 Growth Constraints: New Zealand

While there is some overlap between Australian and New Zealand providers' nominated growth constraints, there are also significant differences.

New Zealand respondents identified domestic backhaul costs, international capacity costs, access network costs, along with access network purchasing rules and the availability of content as constraints to growth in downloads by New Zealand customers.

5.2.1 Domestic Backhaul

In spite of reporting apparently lower expenditure than Australian ISPs on domestic backhaul, respondents nominated this cost as a constraint on traffic growth.

5.2.2 Content Availability

Respondents from New Zealand also nominated the monopoly in the non-government television broadcasting industry as a very important constraint. By preventing NZ ISPs from obtaining licensing rights so they could legally create services such as Australia's Fetch TV, respondents believe their ability to offer content to NZ subscribers is constrained.

Sky TV's status as the sole private-sector television licensee means that it controls the licensing of content which would enable providers to offer IPTV services. To date, it has declined to allow content it controls to be licensed to competitive services.

Market Clarity notes that during May, a new ISP was launched in New Zealand. Fyx bypasses content geolocking to give subscribers access to US services such as Netflix, but quickly withdrew the services.[11]

5.2.3 Access Network Costs

Three-quarters of New Zealand respondents identified access network costs as constraining their ability to offer more generous download quotas to customers.

5.2.4 Access Network Rules

Fifty percent of New Zealand respondents nominated the non-price terms and conditions for accessing the incumbent's access network as placing a constraint on their ability to provision the network as they wished.

One respondent noted that it would prefer to acquire "an unconstrained handover link", but was unable to do so. As a result, its purchase of international capacity is limited by local considerations, since "there is no point in provisioning more IP Transit than the local backhaul".

While these complaints were directed at the incumbent, Market Clarity notes that the Commerce Commission's determinations regulating backhaul services may also act to constrain the flexibility of these services.

[11] http://www.fyx.co.nz/media.html

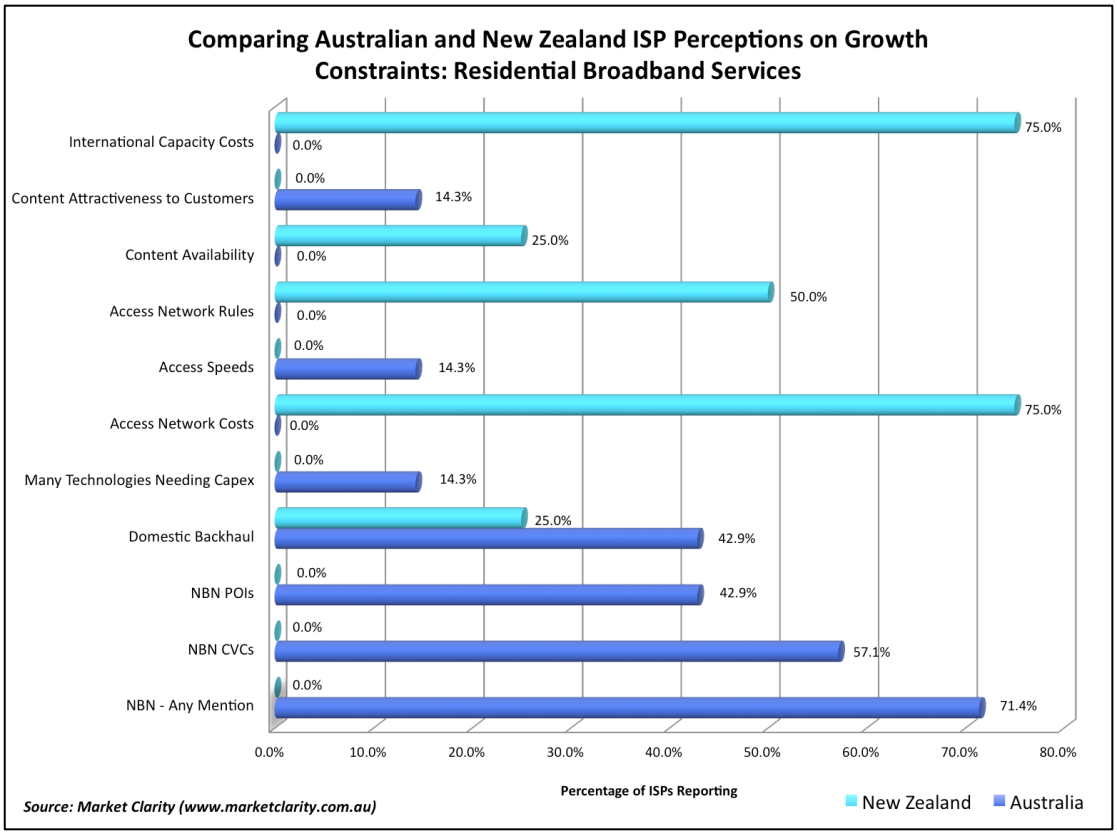
5.2.5 International Capacity Costs

The cost of international circuits and IP Transit — whether purchased separately or as a bundle — was also cited as a growth constraint by 75 per cent of respondents.

5.3 Comparing Australian / New Zealand Constraints

Figure 17 presents a comparison of items identified as growth constraints by Australian and New Zealand respondents.

Figure 17. — Comparing Australian and New Zealand ISP Perceptions on Growth Constraints: Residential Broadband Services



As noted, only one complaint was common to the study samples in both countries, the cost of domestic backhaul.

6 Conclusions

6.1 The Broadband Value Gap

Last year, Market Clarity documented the "broadband value gap" between service offerings in Australia and New Zealand, with a particular focus on the quota allowances offered to the citizens of the two countries.

Although New Zealand ISPs are increasing the availability of higher-capacity services, Market Clarity believes there is still a substantial difference between the two countries.

6.2 Backhaul and IP Transit

It is also clear, as noted in Section 5, that ISPs in New Zealand:

- Agree with Australian ISPs that the cost of domestic backhaul represents a growth constraint; and
- Believe that the cost of international data services and IP Transit (whether purchased separately or as a bundle) represents a growth constraint.

However, it is less clear how well this belief is supported by the measures Market Clarity has been able to present in this study.

In particular, there appears to be a disconnect between the self-reported profit margins of New Zealand ISPs and their belief that they are suffering excessive costs.

It is clear that New Zealand ISPs spend less, on a per-customer, per-month basis, than Australian ISPs on network cost items.

The key unknown is the relative value-for-money ISPs in the two countries receive (in terms of purchase price), particularly for backhaul and IP Transit services.

Respondents in New Zealand showed reluctance to providing IP Transit service prices in a form or with sufficient detail suitable for construction of a sound benchmark.

Market Clarity cannot state whether this reluctance stems from their contractual obligations to upstream providers, or their own policies.

However, in the absence of a sound benchmark, it is difficult to reconcile New Zealand ISPs' assertions that they suffer excessive costs with their greater self-reported profitability, compared to the Australian respondents.

While we were not able to gather enough data to analyse the seeming disconnect between New Zealand ISP complaints about international circuits and IP Transit

costs and the per customer expenditure on this service component, we note that it is possible that the issue may be related to IP Transit acquisition practices. For instance, New Zealand ISPs purchasing IP Transit capacity in small volumes, or from Tier 2 suppliers may pay a premium wholesale price for IP Transit services. In Australia, there is a highly competitive wholesale IP Transit service market, whereas we have not seen evidence of this in New Zealand.

In Australia, Market Clarity has strong industry knowledge of service prices, and conducts ongoing benchmarks for a range of wholesale services, including IP Transit, Dark Fibre and Wholesale Ethernet services.

In New Zealand, we contacted as many ISPs as possible, and have tested our conclusions with informed industry sources to try to confirm our data. If, however, our underlying data, particularly with respect to IP Transit pricing, is in error because of a small sample, we invite providers to contact us.

Market Clarity welcomes contact from all providers with respect to their data, for inclusion in future studies. A strong benchmark is to the benefit of all participants in such studies, allowing participants to compare their performance to their peers, as well as driving competitive pricing on an industry-wide basis.