Bundling telephony services with Pay TV and-or broadband Internet services has become very popular among carriers in Australia. Usually, the structure and positioning of the bundle is defensive. But, used as a price discrimination tool it can increase profitable sales and grow the market. This is also less likely to raise regulatory concerns.

Price Bundling in Australian Telecommunications

John de Ridder

SOME ASPECTS OF BUNDLING

A profitable bundling strategy segments markets for revenue and profit growth based on a detailed understanding of how customers value services differently. The bundled offer is usually priced at less than the sum of the parts. But it can involve a premium if the value proposition is, say, convenience (eg buy a set of stamps rather than search for each member of the set).

Bundling is a common pricing practice and takes a number of forms. A simple example is the set-price lunch (eg 'two courses and a glass of wine for $20'). In this case, the component services can be obtained separately as well as in the bundle. A variation of this form occurs when a product is packaged with an existing one to attract customers. Coles Myer's research suggests that the cross-selling of cut-price petrol increase sales by 1.5 to 2 percentage points (SMH, 12 Dec 2002).

WHAT ARE THE BENEFITS OF BUNDLING?

Both customers and providers can benefit from price bundling. Benefits of bundling to the customer include:

- convenience (eg one bill, simplicity, one point of contact)
- reduced marginal prices (but increased total spend)
- Benefits of bundling to the provider include:
- improved profits and revenues (eg cross-selling, cost savings)
- improved customer retention (eg whole-of-business, deter entry)

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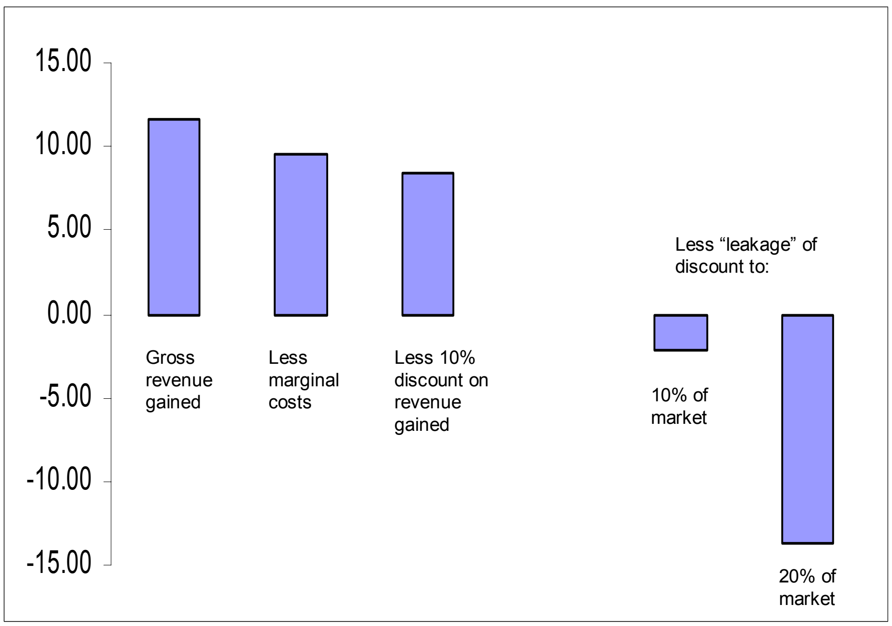
Churn Reduction

Telstra made the issue of adding FOXTEL to its 'Options and Rewards' programme (see Box 1) a show-stopper in the FOXTEL-Optus content-sharing arrangements. Once it had the waiver it sought for 'third-line forcing' (see below) Telstra rejoiced to have *'all the tools we need not only to protect our business but (also) to recover market share, to reduce churn and deepen the relationship we have with our customers'* (Ziggy Switkowski, AFR 14 Nov, 2002).

But as shown in Box 1, the benefits of churn reduction may be illusory.

BOX 1: BENEFITS IN CHURN REDUCTION?

Telstra offers 5% or 10% off eligible services bundled under 'Options and Rewards' [1]. The higher rate applies where three services are combined (eg fixed telephony, MobileNet and either resold FOXTEL or Big Pond). Figure 1 scopes the value of a 10 percent churn reduction to Telstra in terms of national long distance calls.



(Source: Telstra and the author's estimates)

Figure 1 – Benefits of Churn Reduction may be illusory

In 2003 the value of national long distance calls was $1,162m; so avoiding a 1 percent loss through churn is worth $11.6m. But, that is only gross revenue. There are marginal costs associated with this revenue. Impute the interconnection fee of 1.15 cents per end minute for 2004-05 against Telstra's yield of 12.7 cents per minute (ignoring inter-exchange and other marginal costs for simplicity). The opportunity cost in this case is zero (ie interconnect costs and interconnect revenues cancel-out).

Next, we have to take account of the discount that enabled the retention of 1 percent of the revenue base. The 10 percent discount on this marginal revenue is not an issue. The problem is 'leakage'. That is, what proportion of the revenue base **not** at risk takes advantage of the 10 percent discount? As shown, if just 10 to 20 percent of other customers not at risk take-up the offer, all the benefits of churn disappear resulting in a net loss of $2m to $13m per year on long distance service.

Cost Reduction

There May well be cost savings of joint supply in bundling. A firm can integrate services better than a customer can. Benefits to the operator include reduced costs of complexity and any incremental reductions in shared costs such as billing and marketing (economies of scope). Similarly, we know that increased sales over existing infrastructure increases capacity utilisation and reduces average costs (economies of scale).

Different cost structures have major implications for the impact of bundling on earnings. For example, Optus can carry all services except mobiles on its HFC network. This means that once a customer is on this network for any one service, the incremental cost of adding other services on this platform is likely to be very small. In fact, Optus needs the customer to take more than one service to make provision of HFC network access economically viable; but it is in a good position to make this happen.

On the other hand, Telstra provides broadband Internet services both on its cable network and on its copper (ADSL) network. Note that Telstra has not allowed Options and Rewards discounts against ADSL (although it is counted as an eligible service for determining which tier of discount applies to 'relevant charges'). This is because the incremental cost of providing an existing FOXTEL customer with broadband Internet access on cable is much less than providing such access on ADSL. Similarly, the marginal cost of inducing a BigPond customer to take FOXTEL is much less if he or she is already a broadband cable customer.

Cross Selling

The most interesting aspect of bundling is how it can increase the size of the total market. Bundling is an *'effective means of encouraging people to spend more'* [2]. It works best where customers value services or bundles of services differently. Where a customer is willing to pay more than the price charged, there is a 'consumer surplus'. Part of this surplus can be shifted to induce the customer to take-up another service where he or she is not prepared to pay the asking price of that additional service. A simple example is shown in Table 1.

Customer	Service X	Service Y	Bundled
Sue	$40	$10	$50
Tim	$10	$40	$50

Table 1: Reservation Prices (the most the customer is prepared to pay)

Charging $40 each for X and Y results in total sales of $80 with Sue and Tim each buying only one service. A simple 10% discount if you buy both, such as in Telstra's Options and Rewards, will not induce either of these customers to take-up the extra service. But if the services are bundled at a price of, say, $47, total sales will be increased by 17.5 per cent to $94 as Sue and Tim will both take the bundle. Of course, this is only profitable if the marginal cost of providing both customers with an extra service is less than $14. That is not just hypothetical: TransACT bundles broadband Internet, Pay TV and telephony using this approach as shown in Box 2.

BOX 2: BUNDLING BROADBAND EXAMPLES

TransACT operates a cable network in Canberra with the prices offers in Table 2. The stand-alone prices of the two major services are each $50 to $55 but the incremental price of adding either to the other in the bundle (Home Pack) is less than $20.

Service	**Phone**	**Broadband**	**TV**	**Price**
TransTALK	■			$22.00
TalkTV	■		■	$49.95
TalkWeb 512	■	■		$54.95
Home Pack 2	■	■	■	$69.45

Source: www.transact.com.au

Table 2: TransACT

Compare TransACT's pricing with Telstra where the stand-alone prices of Pay TV and broadband in Table 3 are nearly $40 and $50 respectively. Taking account of an increase in the discount from 5% to 10% as the third service is added, the incremental cost of adding Pay TV or broadband under the Options and Rewards bundle is either $32 or $42 respectively.

Service	**Phone**	**Broadband**	**TV**	**Price**
Home Line Complete	■			$23.50
FOXTEL Essentials	(1)		■	$39.95
500MB Cable		■		$49.95
Total with 10% discount (2)	■	■	■	$102.06

Source: www.tbigpond.com/internet-plans/broadband/cable
(1) Must be preselected to Telstra
(2) Options & Rewards provides 5% and 10% for taking 2 or 3 of the above

Table 3: Telstra

This is simple discounting rather than bundling. It has a product focus – add another service and get a better discount. It does not reflect how customers value each of the services or the bundle; each component in the bundle is considered identical. Simple discounting is likely to lead to margin erosion if it does not reflect relative product margins and customer demand. Fortunately, the discount is capped at 10% and does not apply to all services (eg PSTN and ADSL line rentals are excluded).

While bundling works profitably when the services are independent in demand (eg Pay TV and telephony services), it works even better when they are substitutes in demand (eg mobiles and fixed telephony services). This is because it leads to more homogeneity in valuations of the bundle than will be found in the service components separately. For example, in Table 1 Sue and Tim valued each service differently but valued the bundle the same way.

Bundling is not as effective in increasing profits for services that are complementary in demand because customers are inclined to purchase all the components of the bundle anyway (eg local and long-distance calls). This situation is where regulatory concerns should be greatest [3].

WHAT ARE THE REGULATORY ISSUES?

The ACCC's main concern is that *'Used anti-competitively, bundling may foreclose or reduce competition by enabling the carrier or supplier to leverage market power from one market to another'* [4]. There are three sets of legal and regulatory issues in bundling:

- Tying (Section 47 of the Trade Practices Act affecting all carriers)
- Pricing (the Telstra conduct regime under Part XIB of the Trade Practices Act)
- Exclusivity (the Telstra access regime under Part XIC of the Trade Practices Act)

Tying

For Telstra, TransACT and Optus, the Pay TV service (the 'tying' service) is only provided together with fixed telephone service (the 'tied' service). This form of bundling is known as *third line forcing* as the tying service is provided by another supplier (ie FOXTEL). Companies can seek regulatory protection by notifying such conduct to the ACCC, which has 14 days to object.

An important economic factor in considering the impact of bundling on competition is how the services are correlated in demand (see above). If they are substitutes (ie negatively correlated), there should be less regulatory concern as single service providers can still compete, even if there is a near monopoly of a service in the bundle. This is one reason why mobile companies can compete with Telstra's bundling of fixed and mobile telephony on a single bill.

There is also little reason for concern if the services are independent in demand; *'a sufficient proportion of consumers in the market for the tied product* [long-distance] *must also be willing to purchase the tying product* [Pay TV], *otherwise the tie-in will be unlikely to capture a substantial enough proportion of rivals' sales to have a harmful effect'* [5].

Some carriers think this is not the case and that selling Pay TV helps sell fixed telephony. I doubt that but it is ultimately an empirical issue.

There is very justified regulatory concern where two bundled services are complementary in demand (ie positively correlated) and there is a near monopoly in the 'tying' service. First, such bundling is unlikely to improve profits. Second, and more importantly, it creates a hurdle for competitors because they now have to supply both services to satisfy customers. It is not yet clear if telephony operators have to re-sell Pay TV in order to be competitive.

However, even where there is cause for concern (ie complementary demand), there can be mitigating factors or remedies which can allow bundling to proceed:

- There may be a cost basis for any price differences between the bundled service and its unbundled parts. But this may be difficult to establish. The new, tougher accounting separation requirements for Telstra will not help as they apply only to the traditional fixed line network (i.e. they exclude BigPond, mobiles and Pay TV).
- Or, the access regime effectively eliminates the monopoly so that competitors could construct similar bundles (even if they choose not to). This is why the ACCC secured voluntary section 87B undertakings from the parties to the Pay TV content sharing arrangements allowing others to resell Pay TV. For example, AAPT and Harvey Norman have agency agreements to resell FOXTEL (AFR 26 May 2003).
- Or, the bundling may be necessary for safety or to control quality; which is not the case here.

Pricing

A NERA report [6] for the ACCC on the pricing of bundles says that there are three necessary conditions for an anti-competitive price squeeze to be a rational and viable strategy for an integrated firm:

- two markets must be vertically related and the upstream product must be a necessary input into producing the downstream product
- at least one firm must be vertically integrated and possess market power in both the upstream and downstream markets; and

- the downstream market must be open to competition from rival, non-(vertically) integrated firms.

The bundling of FOXTEL with fixed telephony, which has been the focus of most angst, does not fit this set of conditions. Neither service is an essential input for the other and it is debateable how much market power Telstra has in the long distance call market. NERA itself says often that Pay TV and telephony are in separate markets.

Putting market definitions aside, the usual way to detect a price squeeze is to perform an 'imputation test'. In a single product case, this means that the retail prices must equal or exceed the wholesale cost plus marginal retail costs. However, while this approach may work for single services, it is not going to work generally (see Box 3).

Box 3: Imputation Testing of Bundles

Suppose the tied (competitive) service is X in Table 4 below. Sold separately, X passes the imputation test (40-25-5 > 0). The bundled price of $47 provides an implicit discount on each service of about 40 per cent ($47 versus $40 * 2). X does not pass the test on this implicit price ($47*0.5 < 25 + 5).

	Service X	Service Y	Bundle
Prices	$40	$40	$47
Access price	$25		
Marginal retail cost	$5		

Table 4: Imputation Testing

It would be a pity to prevent this bundle as it is welfare-improving with both consumer surplus increasing (using Table 1, $50 value > $47 paid) and also increasing producer surplus (if marginal revenues exceed marginal costs).

Exclusivity

Some operators are concerned about *'risks of providing Telstra and Optus with a near exclusive ability to bundle Pay TV with a range of telecommunications services'* (David Bedford, then CEO of AAPT, AFR 15 Nov 2002).

The voluntary 87B undertakings given by Telstra and Optus Vision with respect to their HFC cable networks concern only television content and distribution. That is, Telstra and Optus remain the major providers of broadband Internet over cable. It is unclear whether ISPs consider the ability of Telstra and Optus to sell both voice and Internet services against them is a major problem for them. It was a major issue in making broadband services over wholesale ADSL pay. The business models looked weak without telephony. But this is no longer the case as *'Line sharing will enable broadband providers to focus on providing high-speed data services to consumers, such as the Internet, video-on-demand and other multi-media applications, without needing to take on the responsibility and cost of providing voice services'* (The ACCC's chairman, Allan Fels, 2 Dec 2002)

CONCLUSIONS

Price bundling is still a new concept in Australian telecommunications. With the exception of TransACT, carriers seem to be using price bundling as a loyalty or discount programme rather than to grow the market. To use bundling properly does require a keen understanding of what customers want and are prepared to pay. And, to make it profitable and minimise regulatory risks operators also need to know their marginal costs and demand relationships across services.

NOTES:

1. For simplicity, we ignore the 15% anniversary discount applied in the 12th month, which would bring the average annual discount to just over 11%. Similarly, we assume the average discount is 10%.

2. The McKinsey Quarterly, 2003 Number 1, 'A help line for European telcos'

3. The 'declaration' of Telstra's local call service in December 1998 can be rationalised in the context of bundling. It allowed Telstra's competitors to supply an integrated package of services (ie access, local, long-distance and international) all on a single bill. While the single bill was an undiscounted bundle, it was a very attractive convenience proposition for customers. The declaration of local calls removed regulatory concerns about bundling across local (monopoly) and long-distance (competitive) call services.

4. Section 8.2.1 of 'Emerging Market Structures in the Communications Sector, ACCC, June 2003

5. 'Anticompetitive Bundling Strategies', NERA, January 2003

6. 'Imputation Tests for Bundles Services', NERA January 2003

THE AUTHOR

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