



# **Sky/Vodafone – review of economics reports on LOUI**

**Bell Gully and Buddle Findlay**

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**Project Team**

James Mellsop

Kevin Counsell

Will Taylor

Barbara Kaleff

NERA Economic Consulting  
Level 18, 151 Queen Street  
Auckland 1010  
New Zealand  
Tel: 64 9 928 3288 Fax: 64 9 928 3289  
[www.nera.com](http://www.nera.com)

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Confidential information has been redacted from this version of the report.

## 1. Introduction

1. We have been asked by Bell Gully and Buddle Findlay to review aspects of two reports filed in respect of the Commerce Commission's letter of unresolved issues ("the LOUI") regarding the proposed Sky/Vodafone merger, dated 31 October 2016:
  - a) A report by Covec dated 8 November 2016, prepared for 2degrees and TVNZ; and
  - b) A report by LinkEconomics dated 10 November 2016, prepared for Blue Reach.

## 2. The Covec report

### 2.1. Introduction

2. We have been asked to review two arguments put forward in the Covec report:
  - a) Post-merger, Vodafone would receive Sky content at a significant cost advantage compared to other TSPs; and
  - b) TSPs will be denied scale by the merger.

### 2.2. Content cost would not be asymmetric

3. The Covec report's argument is that, post-merger, Vodafone would receive Sky content at a cost advantage compared to other TSPs because the content would be provided to Vodafone at "zero marginal cost". For example, at [30] Covec states:

*Independent TSPs will therefore face ECPR prices for Sky's content, while the merged entity's TSP will face an internal transfer price of zero.*

4. However, this argument reflects a misunderstanding of the implicit internal price that a vertically integrated business charges itself. Regardless of what internal "transfer price" is recorded in the accounts of the merged entity, Sky would always implicitly charge Vodafone a price equal to ECPR. This principle is well established in the economics literature, for example:
  - a) Swanson and Baumol (2005, pp.30-31) state that ECPR is "the price that the monopoly owner of any bottleneck input...implicitly charges itself for that bottleneck input";<sup>2</sup> and

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<sup>1</sup> See also Jerry A. Hausman and Timothy J. Tardiff (1995, p.543), "Efficient local exchange competition", *Antitrust Bulletin*, 40, 529-556, at p.543; and William J. Baumol, Janusz A. Ordover and Robert D. Willig (1997), "Parity Pricing and Its Critics: A Necessary Condition for the Provision of Bottleneck Services to Competitors", *Yale Journal on Regulation*, 14, 144-163, at p. 151.

<sup>2</sup> Daniel G. Swanson and William J. Baumol (2005, pp.30-31), "Reasonable and Non-discriminatory (RAND) Royalties, Standards Selection, and Control of Market Power", *Antitrust Law Journal*, 73, 1-58.

- b) Laffont, Rey and Tirole (1998, p.22) state that ECPR is “the price [the vertically integrated firm] imputes into its own competing services.”<sup>3</sup>
5. The logic is that, within the merged entity, Sky is implicitly charging Vodafone a price that, when added to Vodafone’s costs (in the downstream market), allows the merged entity to set the profit-maximising retail price for a Sky-broadband bundle. Since ECPR is equal to the retail price minus those downstream costs, it follows that ECPR is exactly the same as the implicit price that Sky charges Vodafone within the merged entity.<sup>4</sup>
  6. Accordingly, the Covec report is incorrect to state that Vodafone would face an internal price of zero while independent TSPs would face ECPR; rather, they would all face a price of ECPR. The actual internal transfer price recorded in the firm’s accounts is simply an accounting tool that allocates costs between the merged entity’s upstream (Sky) and downstream (Vodafone) divisions, and increases in this price just change this allocation of accounting costs, rather than change the final retail price.
  7. Likewise, the internal transfer price does not affect the quantum of costs the merged entity would avoid when wholesaling content to a rival RSP, rather than retailing. There is accordingly no basis to the claim at [30] of the Covec report that the ECPR price would rise.

### **2.3. The Covec report provides no evidence that the competitiveness of rivals would be undermined**

8. At [78] and [79], the Covec report states it agrees with the Commission regarding the mechanism by which competition would be reduced under the factual. However, the only support the Covec report offers for this theory is quoting Sky’s confidential submission on the counterfactual that, [REDACTED].

#### **9. [REDACTED]**

10. However, this conclusion is incorrect for the following reasons:

- a) [REDACTED]; and
- b) Smaller RSPs have been gaining market share, which is inconsistent with Spark and Vodafone being the only players with sufficient scale to compete for broadband customers.

### **3. The LinkEconomics report**

11. The LinkEconomics report analyses two issues (see page 7):

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<sup>3</sup> Jean-Jacques Laffont, Patrick Rey, and Jean Tirole (1998, p.22), “Network competition : I. Overview and nondiscriminatory pricing”, *RAND Journal of Economics*, 29(1), 1-37.

<sup>4</sup> In algebraic terms, if the implicit price that Sky charges Vodafone is  $x$ , Vodafone adds this to its downstream costs of  $y$ , to set a retail price of  $p$ . It follows that  $p = x + y$ , so that Vodafone covers its costs (including a return on capital). Rearranging this equation, the implicit charge is  $x = p - y$ , which is exactly how ECPR is calculated.

- a) “Issue 1: Are the New Zealand telecommunications markets sufficiently competitive?”; and
  - b) “Issue 2: Impact on competition if Vodafone’s rival mobile and fixed line operators’ scale reduces”.
12. Neither of these two issues directly addresses the relevant merger analysis questions:
- a) Issue 1 analyses the current state of competition, whereas what is relevant for merger analysis is how competition would be *changed* by the merger; and
  - b) Issue 2 sounds like the correct question, but on closer inspection the analysis in the LinkEconomics report can be characterised as addressing whether a *competitor* (i.e., Blue Reach) would be harmed, as opposed to whether *competition* would be harmed. The latter is ultimately a question of whether consumers would be worse off.
13. The LinkEconomics theory of harm in relation to issue 2 is as follows:
- a) The merged entity would take all Sky subscribers, or would at least restrict the contestability of them; and
  - b) This would reduce the ability of many TSPs to expand and achieve scale, which would in turn reduce the competitiveness of these TSPs (e.g., a “key barrier to entry and expansion is achieving minimum efficient scale” (page 3). This would in turn undermine the Blue Reach business case.
14. Our responses to these two points are:
- a) There is no evidence to suggest that all or even a majority of Sky Sport subscribers would shift to the merged entity if it increased its discount, even in the absence of rival TSP reactions – see our 11 November 2016 report; and
  - b) For a firm already in the market, competitiveness is not determined by whether or not the firm is at minimum efficient scale. Competitiveness is determined by forward-looking costs.<sup>5</sup> The fact that the two largest players (Spark and Vodafone) are losing share (and therefore smaller players are gaining it) contradicts the LinkEconomics argument that scale is necessary to compete.
15. Put another way, even if the merged entity actually did capture every Sky customer, consumers would only be harmed if this allowed the merged entity to subsequently raise price or reduce quality.
16. Finally, when analysing issue 2, the LinkEconomics report assumes the customer segment that purchases Sky “will tend to have higher than average ARPU” (see, e.g., page 6).

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<sup>5</sup> The LinkEconomics report also makes the following claim: “Backhaul and international transmission are typically priced with a structure that effectively provides substantial scale discounts. This means that the unit cost of a provider that uses a low capacity circuit, for example, will be substantially higher than a large provider who uses a higher capacity circuit.” We do not know whether this is correct or not, but even if it is, the absolute dollar amounts are small – we are advised by Vodafone that backhaul costs are \$[REDACTED] per broadband customer per month.

However, no theory has been put forward to support this assumption, and no evidence. Indeed, others who have raised a similar issue in this process also do not provide any evidence. The only theory for such an assumption has been provided at [34] and [37] of the 30 September 2016 Covec report. The argument made there is that:

- a) Sky TV is a “high value service” [34]; and
  - b) Given that, “the customers who currently buy services from both Vodafone and Sky TV ... are likely to be among Vodafone’s most valuable (i.e. high ARPU) customers” [37].
17. Therefore the argument appears to be households that value Sky highly (and are therefore willing to pay for it) will also spend a relatively high amount of money on telco services. But it is unclear why this should be the case.
  18. For every possible theory (e.g., wealthy people tend to spend more on both Sky and broadband), it is possible to think of a counter theory (e.g., some people tend to spend their leisure time watching Sky, while others prefer to surf the internet).
  19. The issue is ultimately empirical, and at this stage, no empirical evidence has been adduced by those making the “high ARPU” customer argument.
  20. We have now been provided with Mosaic customer segmentation data by Sky and Vodafone, from which we have been able to gather that:
    - a) [REDACTED] and
    - b) [REDACTED]
  21. Regarding the first point, Figure 1 below shows the percentage of Sky’s customer base by median household income of Mosaic customer groups.<sup>6</sup> As can be seen, the [REDACTED]

**Figure 1 [REDACTED]**

22. As for the second point, we do not have sufficient data to compare the broadband data preferences of Sky versus non-Sky Vodafone customers, but across the customer segmentation data we can infer preferences across cohorts. Using data broken down by customer type,<sup>7</sup> we know which Vodafone customers do and do not subscribe to Sky, and among the Vodafone/Sky subscribers, we know which broadband package they purchase. Therefore, we can see how much each customer segment values Sky and then use the broadband preferences of the Sky subscribers in that segment as a proxy for the cohort. For example, among Vodafone’s customers [REDACTED].

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<sup>6</sup> Median income for each customer segment was obtained from the Mosaic New Zealand geodemographic category descriptions provided by Sky. Median incomes for groups C and D are derived by the average income of subgroups, rounded to the nearest 10,000. Note that Mosaic groups in the Sky data are not the same categories as provided for the Sky/Vodafone data.

<sup>7</sup> The description of groups in the Mosaic data (a combination of age, income, and spending style) is provided in Appendix A. Each group is broken into subgroups, which are represented in the analysis in Figure 2.

23. This is shown graphically in Figure 2 below. Each circle represents a customer sub-segment (color-coordinated with the main customer segment), the size of which represents the proportion of Vodafone's customer base they make up (the bigger the circle, the more representation that group has in Vodafone's customer base).<sup>8</sup> Along the x-axis is the proportion of Vodafone customers in that segment that purchase Sky, while the y-axis shows the proportion of Sky-subscribing Vodafone customers that purchase an unlimited broadband package in each segment. The figure shows that there is [REDACTED]<sup>9</sup> across cohorts between subscribing to Sky and choosing an unlimited broadband package. Put another way, [REDACTED]

**Figure 2 [REDACTED]**

24. Accordingly, the LinkEconomics assumption and the Covec argument are both inconsistent with the available evidence.
25. The "high ARPU" argument also overlooks the fact that the theory of harm is the merged entity would attract customers by discounting Sky. This has two implications:
- a) The customers that are attracted by discounts and promotions are likely to be the most price sensitive ones, who may not actually spend the most on telco products;<sup>10</sup> and
  - b) The correct economic metric is gross margin, not ARPU, and it is gross margin across the bundle that is used to attract the customer, not just the telco component. The discount on the Sky component would reduce the profitability of the customer. Any other RSP could "invest" in a similar way to attract customers that it considers to be highly profitable, by discounting a bundled product, or even discounting the telco product itself.

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<sup>8</sup> A table with the underlying data (disaggregated by subgroup) derived from the Vodafone Mosaic data is provided in Appendix A.

<sup>9</sup> [REDACTED]

<sup>10</sup> For example, with relevance to the current short-term promotional offers by Vodafone of Sky products, Lewis (2003) finds that customers acquired by offering discounts result in lower lifetime value than customers acquired at regular prices, and that retention rates of customers are negatively related to the depth of discounts offered. Michael Lewis (2006), "Customer acquisition promotions and customer asset value", *Journal of Marketing Research*, 43(2), 195-203.



**Appendix A. [REDACTED]**

# NERA

ECONOMIC CONSULTING

NERA Economic Consulting  
Level 18, 151 Queen Street  
Auckland 1010  
New Zealand  
Tel: 64 9 928 3288 Fax: 64 9 928 3289  
[www.nera.com](http://www.nera.com)