

---

# Lear Competition Notes

---

Which test for bundled discounts

Massimo Tognoni  
Cristiana Vitale

September 2009

## The motivations for bundled discounts

Bundled discounts, multiple rebates and mixed bundling are synonymous. They describe situations when a multi-product firm offers a bundle of products for a lower price than the combined cost of purchasing all the products in the bundle separately.

Bundled discounts are a form of price cutting, which are presumptively beneficial to consumers. Indeed there are a number of pro-competitive, or competitive-neutral, reasons that explain why firms offer bundled discounts as opposed to single product discounts: the discount may reduce consumers' search and transaction costs, it can allow a firm to exploit economies of scale and scope and pass them to its customers, it can be a form of price discrimination aimed at expanding output to the benefit of the consumers<sup>1</sup> and it can be used to increase the take-up of innovative products.

Yet, when these bundled offers come from a firm which is dominant in the production of one of the goods included in the bundle, there is a fear that it may be exploiting this market power to foreclose competitors, thus harming consumers. The economic literature has identified two main anticompetitive reasons for bundling. First, the bundle may represent an offensive strategy aimed at leveraging the incumbent's market power into another market or, second, it may be a defensive strategy for protecting the monopolized market.<sup>2</sup>

This implies that the discount that accompanies the bundled offer has to be carefully evaluated before it is possible to determine if it represents a legitimate strategy or not.

## The price-cost test and the potential exclusionary effects of bundled discounts

The Guidance Paper recently released by the European Commission (hereafter: the Commission) on "Enforcement Priorities in applying Art. 82 for exclusionary abuses"<sup>3</sup> and the report issued by the US Department of Justice (hereafter: the DoJ) on "Single-Firm conduct"<sup>4</sup> set out a framework to analyze the potential exclusionary effects of bundled discounts from dominant firms.

The Commission and the DoJ share a similar approach that envisages two steps: (i) assessing the type of competition faced by the dominant undertaking (whether this is bundle-to-bundle or on single products); and (ii) assessing the impact of the discount applying, according to the outcome of the first step, a predatory-style test or an implicit price-cost test.

The first step of the analysis consists in assessing whether the bundled offers of the dominant firm are competitively constrained by similar packages supplied by rivals or only by stand-alone offers. If bundle-to-bundle competition is sufficiently developed, as most firms offer bundles or would be able to do so easily, then the analysis should mirror that followed in predatory cases<sup>5</sup>:

<sup>1</sup> See G. J. Stigler (1963), *United States v. Loew's Inc.*: a note on block-booking, *The Supreme Court Review*, 152.

<sup>2</sup> The rationale is that through bundling a dominant firm would force a rival, who is willing to start selling the monopolized product, to enter more markets at the same time to be able to compete. This may raise the cost of entry and increase the risk of failure, thereby making entry less likely.

<sup>3</sup> EU Commission (2008) "Guidance on the Commission's Enforcement Priorities in Applying Article 82 EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings".

<sup>4</sup> U.S. Department of Justice (2008) "Competition and Monopoly: Single-firm Conduct under Section 2 of the Sherman Act".

<sup>5</sup> The analysis of an alleged predatory behaviour differs in the two jurisdictions. In the US the plaintiff is required to show a dangerous probability of recoupment, whereas in the EU recoupment is presumed when a firm is dominant. A detailed examination of the differences in these two predatory tests and of their possible implications is beyond the scope of this note.

the price of the bundle should be compared with an appropriate measure of the cost of the entire bundle. Whereas, when one or more products in the bundle are monopolized, rival firms cannot provide the same bundle as the dominant firm and, thus, bundle-to-bundle competition is not possible. In this case, an implicit price-cost test should be applied.

### *Implicit price-cost test*

If competition is between the bundle offered by the dominant firm and the single-product offers of its competitors, the latter firms must provide the entire value of the discount the incumbent offers on the bundle on their narrower product offerings. In other words, considering a two-product bundle, the competitor must charge a price for the competitive product such that a customer is at least indifferent between purchasing the bundle from the dominant firm and buying the monopolized product from the dominant firm and the competitive product from the rival.

Such price, which is called *implicit or imputed or incremental*, is the price that compensates a customer for not buying the bundle from the dominant undertaking. It is calculated by taking the price of the bundle and deducting from it the stand-alone price of the monopolised product.

Once the implicit price has been calculated, this test works like the predatory one, in that it compares the implicit price with a measure of the costs of the stand-alone product. The Commission and the DoJ identify the LRAIC (Long Run Average Incremental Cost)<sup>6</sup> as the relevant cost benchmark. If the implicit price for the competitive product is below the LRAIC of supplying that product, a competitor could not match that price and, thus, the bundled strategy may generate exclusionary effects.

### **Some issues in the implementation of the implicit price-cost test**

The Commission's Guidance Paper and the DoJ report provide valuable indications for the competitive assessment of bundled discounts. However, they do not settle all the issues that arise when these practices have to be assessed.

This note focuses on two aspects that we believe are of particular relevance in the implementation of the price-cost tests and which have not been addressed neither by the DoJ, nor by the Commission: the assessment of the type of competition (whether bundle-to-bundle or single product) and how to allocate the discount across products when the bundle includes more than two goods.

### *How to assess the type of competition*

We pointed out above that the standard of proof varies with the type of competition faced by the dominant undertaking and different standards of proof may lead to opposite conclusions on the potential risk of foreclosure raised by bundled discounts.

---

<sup>6</sup> The Commission defines the LRAIC as “the average of all the (variable and fixed) costs that a company incurs to produce a particular product”.

### Example 1

Suppose that a dominant firm in a market (product A) sells also a different good (product B) in a competitive market. The incremental cost of producing good A is 5€ and that of good B is 3€, and assume there are no common or joint costs. The price of product A is 10€ while the price of product B amounts to 5€. The firm offers a 3€ discount on the package if customers purchase the two products together. The table below summarizes these information:

	A	B	Bundle ABC	Bundled discount
Price	1	5	12	3
Incremental cost	5	3	8	

If bundle-to-bundle competition is possible, following the predatory test the bundle price (12€) should be compared with the aggregate cost<sup>7</sup> of producing A and B (8€). Since the price exceeds the costs the conduct should not raise competitive concerns.

If instead a rival cannot provide the same products as the dominant firm, one should assess whether the implicit price of the competitive product B (2€ = 5 - 3) covers its incremental cost (3€). A presumption of anticompetitive conduct would arise in this case, as the pricing strategy of the incumbent fails the test.

In general, the predatory-style test is more lenient because it allows cross-subsidies between the various products belonging to the bundle, while the implicit price-cost test imposes stricter constraints on the dominant firms' pricing strategies. The evaluation of the type of competition that prevails in a market, thus, plays a critical role in the competitive assessment of bundled discounts.

The Commission and the DoJ share the view that bundle-to-bundle competition is possible when there are competitors selling identical bundles (actual competition) or when they could do so within a limited time-frame (potential competition).

Competitors selling identical bundles constitutes clearly an evidence that, at least to some extent, competition between bundles is possible. However, assume that just one of the numerous competitors is commercializing a bundle identical to the one sold by the incumbent, would that be sufficient to claim that competition is actually taking place between bundles? What if just a few, but large, firms were able to sell the bundle? Of course, if as a result of the concerned conduct only a few firms remained in the market, that would not by itself imply that consumers would be harmed, because competition between a small number of suppliers may be as fierce as that occurring between a large number of firms.

In general, both the number of the competitors selling identical bundles and their relative strength may matter in establishing whether competition can be considered as bundle-to-bundle. For example, the *Comision del Mercado de las Telecomunicaciones* (the Spanish Telecoms regulator), in its investigation on the double and triple play bundles offered by Telefonica,<sup>8</sup> has assessed not only whether alternative operators supplied similar bundles, but

<sup>7</sup> Although the cost benchmark used in predatory test is the *Average Avoidable Cost* (AAC), for the sake of simplicity we assume in this example that LRAIC coincides with AAC.

<sup>8</sup> *Comision del Mercado de las Telecomunicaciones* (2007): "Resolución por la que se aprueba la metodología para el análisis ex ante de las ofertas comerciales de Telefonica de Espana, S.A.U."

also the extent to which they were technically able to market their offers on a scale comparable to that of Telefonica.

Assessing bundle-to-bundle potential competition is a more challenging task. There are at least two ways a competitor could replicate the dominant firm's bundled offer: (1) it might start producing all the goods in the bundle and commercialize its own bundle; or (2) it might team with producers of the other goods to provide a bundle.

As for the first option, we believe that the assessment of whether one or more competitors would be able to offer the bundle may be driven by the same economic criteria used in merger control to analyse whether the threat of entry constitutes a sufficient competitive constraint on the merging parties, i.e. likelihood, timeliness and sufficiency. Likelihood of entry is essentially related to the presence and the height of entry barriers that would prevent a competitor to expand the scope of its production. Timeliness of entry guarantees that the competitors could promptly thwart any attempt to leverage market power by the incumbent. Timeliness is of particular relevance when switching costs are high, as a late entry may limit the ability of a rival to compete for a substantial part of the demand. Finally, entry in the monopolized market must be of sufficient magnitude to constitute an effective constraint against the potential foreclosing intents of the dominant undertaking.

Bundle-to-bundle competition may also occur through joint ventures of competitors<sup>9</sup>. The fact that such joint ventures have already taken place in the past may provide useful insights into their actual feasibility. If not, the relevant questions are whether competitors have the ability to coordinate (either explicitly or implicitly)<sup>10</sup> and what the costs of this coordination are. Moreover, to make comparable offers competitors must be able to achieve the same efficiencies (for example, economies of scope) as the dominant undertaking and this may not be straightforward. For example, manufacturing synergies may be hardly replicable by competitors which rely on separate plants to produce the goods in the bundle. However, if the efficiencies result from economies in the distribution or marketing activities, it is more likely that competitors can replicate them by teaming together.

### *How to allocate the discount across competitive products*

As we have explained above the *implicit price* of the competitive product in the bundle is calculated by deducting the stand-alone price of the monopolised product from the price of the bundle. The issue becomes more complex if the bundle includes more than one competitive product. In this case, it is necessary to determine how to allocate the discount across these products.

The DoJ claims that the entire bundled discount must be allocated to all competitive products together and the test must be run on the sub-bundle of competitive products as a whole. The Commission, instead, requires to allocate the entire discount to each competitive product and then apply the test to one product at a time. The example below shows that the two approaches may give rise to very different outcomes.

<sup>9</sup> Actually, only the DoJ makes explicit reference to this option.

<sup>10</sup> Some scholars suggest that explicit coordination among firms competing in the various product markets covered by the bundle may be unnecessary. "In a market with reasonably good, low-cost information, and firms with reasonable equivalent strength, one would expect implicit coordination of price cuts", Crane (2006): "Mixed bundling, profit sacrifice and consumer welfare", Emory Law Journal (Vol. 54).

Example 2

Suppose that a dominant firm sells a monopolized product (product A) and two competitive products (product B and product C). The incremental cost of producing the goods is 3€ for product A and 4€ for both product B and product C. Further, assume that there are no common or joint costs. The stand-alone price is 10€ for product A, 6€ for product B and 7€ for product C. The firm offers a 4€ discount on the bundle if customers purchase the three products together. The situation is presented in the table below:

	A	B	C	Bundle ABC	Bundled discount
Price	10	6	7	19	4
Incremental cost	3	4	4	11	

Under the DoJ approach, the implicit price of the sub-bundle of the two competitive products is given by the sum of their stand-alone prices ( $6 + 7 = 13€$ ) minus the entire bundle discount (4€) and thus amounts to 9€. This must be compared with the incremental cost of producing the two products, which is 8€ ( $= 4 + 4$ ). The pricing scheme passes the test, as the implicit price of the competitive sub-bundle exceeds the relative incremental costs.

Under the Commission standard, in order to calculate the implicit price one should attribute the entire discount to each competitive product at a time. Hence, the implicit price of product B is 2€, which is given by the difference between its stand-alone price and the bundled discount. Similarly, the implicit price of product C is 3€. Both competitive products fail the test as their implicit prices lie below the relative incremental costs.

The DoJ states that the discount should be attributed to all the competitive products jointly, regardless of whether the plaintiff, or any other rival, produces all the competitive products. The rationale is that, since the non-monopolized goods are competitive, *a rival could offer these goods in a package even if the rival did not itself produce all these goods*. The presumption behind this statement is that equally efficient producers of competitive goods can always team together and jointly offer a package that replicates the dominant undertaking's one.<sup>11</sup>

The DoJ's rule is easy to apply (because no further reallocation of the discount is necessary) and lowers the risk of false positive. Yet, it does not account for situations where there are no competitors producing the whole range of competitive products and a joint-supply agreement may be hard to reach. Thus, it might penalize firms that only sell one product.

The Commission takes an approach which lies at the other extreme, it attributes the entire discount to each of the products in the dominant undertaking's bundle. This approach guarantees the protection of single-product firms, but it may impose too high a floor to legitimate and beneficial-to-consumer price reductions, since the discount is counted more than once. Hence there is a risk of chilling pro-competitive price cuts.

Overall, neither the Commission nor the DoJ standards appear to be completely satisfactory, as each one may lead, respectively, to over- or under-deterrence. Alternative approaches have been proposed, but they are not convincing either. For example, the New Zealand Commerce

<sup>11</sup> As long as the implicit price of the competitive products as a whole is above the incremental costs of producing the two and competitors are as efficient as the dominant undertaking, there is always a combination of stand-alone prices of the competitive products that can match the bundle offer and still be profitable.

Commission, in an investigation concerning bundle offers in the telecoms sector, attributed the discount to each of the competitive products in the bundle in proportion to the revenues earned by the incumbent from its stand-alone sales of the corresponding products. This allocation rule represents an attempt to allocate the discount across all the competitive products, however it has the limitation that it does not seem to be based on any clear economic principle.

In general, the replicability of the dominant firm's bundled offers by single-product firms depends on their ability and their incentive to reach an agreement on how to share the burden of the entire discount among themselves. Consider a dominant firm selling a bundle of three products, one monopolized (A) and two competitive (B and C). To replicate the dominant firm's bundled offers, single-product competitors of the competitive goods must lower their prices up to the point where a customer is indifferent between purchasing the bundle from the dominant undertaking or buying the three products separately. The total reduction in the prices of the two competitive products, thus, must match the entire value of the bundled discount. In principle, therefore, competitors have conflicting interests because each one would like the other to contribute more to this reduction.

This raises the question of how best they can share the burden of the overall reduction in prices needed to match the bundled discount. An accurate analysis of the features of the relevant markets that may affect the incentive to collaborate can then help in developing a more refined economic approach to allocate the discount across competitive products.

## Final remarks

The Commission's Guidance Paper and the DoJ report set out a two-step approach to analyse the potential foreclosing impact of bundled discounts by dominant firms. Even though these two documents represent an important step towards the development of a general framework for assessing bundled pricing schemes, a number of aspects need to be further developed. This note highlights two issues relative to the implementation of the price-cost test, namely the evaluation of the nature of competition in the relevant markets and the rule to allocate the discount across the products when bundle-to-bundle competition is not possible.

It is however important to emphasise that the price-cost test tells only part of the story. Two conditions, indeed, must hold to establish that an exclusionary behaviour is in breach of art 82: foreclosure and consumer harm. Neither is sufficient by itself, but both are necessary. In other words, both have to be proved for a conduct to be deemed abusive, whereas it is sufficient to disprove one to conclude that a conduct is compatible with Article 82, or similar rules against anticompetitive unilateral conducts.

The price-cost test provides an indication on whether the dominant firm's strategy is replicable by competitors and, thus, whether it may lead to foreclosure. No conclusions, however, can be drawn from the test about the potential harm to consumers resulting from the concerned conduct. In other words, the test is a tool to detect exclusionary effects and hence, it represents only the first step in the overall evaluation of bundle strategies. It plays an important role, though. If passed, it may be conclusive in ruling out exclusionary allegations where competitors are not at risk of foreclosure, thereby avoiding complex assessments of the effects on consumer welfare.

## LEAR

---

Lear is a research centre and an economics consultancy that specialises in applying micro-economic and quantitative tools to address complex legal, regulatory and contractual issues.

We leverage on our in-depth knowledge of economics to assist our clients in developing and implementing solutions that are effective, simple and clear.

For more information please see our website [www.learlab.com](http://www.learlab.com)

If you want contact the Authors:

**Massimo Tognoni** - [massimo.tognoni@learlab.com](mailto:massimo.tognoni@learlab.com)

**Cristiana Vitale** - [cristiana.vitale@learlab.com](mailto:cristiana.vitale@learlab.com)

---

### Roma

Via del Banco di S. Spirito, 42  
00186 - Rome  
tel. +39 06 68 300 530  
fax +39 06 68 68 286  
email: [roma@learlab.com](mailto:roma@learlab.com)

### Brussels

Place du Grand Sablon, 36  
B-1000 Brussels  
tel. +32 (0) 2 289 13 47  
fax +32 (0) 2 791 57 32  
email: [brussels@learlab.com](mailto:brussels@learlab.com)