

COMMERCE COMMISSION

Decision No. 482

Determination pursuant to the Commerce Act 1986 in the matter of an application for clearance of a business acquisition involving:

CENDANT CORPORATION

and

BUDGET GROUP INCORPORATED

The Commission:

MJ Belgrave
PR Rebstock
D Bates QC

Summary of Application:

The Cendant Corporation has sought clearance to acquire up to 100% of the shares in Budget Group Incorporated

Determination:

Pursuant to section 66(3)(a) of the Commerce Act 1986, the Commission determines to give clearance for the proposed acquisition.

Date of Determination:

6 November 2002

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grew as a result of a switching by customers from the merged entity, it would be allocated more ready bays.

Differentiated Product Markets

141. In differentiated products markets, the products of firms are by definition not perfect substitutes for each other. The substitutability between products will vary depending upon differences in their various characteristics, which may include their physical specifications, brand image, associated services and location of sale. In simple terms, differentiated products can be thought of as being arranged in a “chain of substitutes”, where those in adjacent positions in the chain tend to be close substitutes, and those positioned further apart are less close substitutes.
142. With differentiated products, competition can be localised between firms producing immediately adjacent substitutes. The acquisition by a firm of its adjacent competitor may cause localised price rises (rather than price rises across ‘the market’) post-acquisition, because of the loss of the localised competition between the two products in circumstances where more distant substitutes fail to provide much of a competitive constraint. This effect is likely to be most marked when a business acquisition results in the two closest (and perhaps most popular) substitutes being merged. In addition, rivals may also be able to raise their prices in the changed competitive environment brought about by the acquisition.
143. The supply-side characteristics of differentiated products markets are important, as the potential market power of the combined entity may be offset by the actions of rivals. They may be able to re-position their products closer to that of the combined entity to replace the lost localised competition, or to strengthen the promotion of existing products. Moreover, it may be possible for new products to be added through new entry.
144. The Commission will consider both demand-side and supply-side factors, and the overall impact of the potential loss of competition, in assessing whether competition is likely to be substantially lessened.

Use of Modelling in Predicting Possible Unilateral Market Power

145. In Decision 448 the Commission made use of a Bertrand oligopoly model to gauge the possible price effects resulting from the strengthening of unilateral market power in that case. The model was devised by Shapiro¹³. The model is explained at paragraph 134 of Decision 448 as follows:

“Broadly, the model predicts that product differentiation allows firms to exert market power, and that mergers between significant firms are likely to allow the merged entity (and to a lesser extent other firms) to raise prices. The essential reason why this model predicts that market power may be enhanced by a merger in a differentiated products market is the loss of the competition between the merging brands. Suppose firm A acquires firm B. Previously, it may have been unprofitable for firm A to increase its prices because it would have lost too many customers, some of whom would have switched to firm B. Following the merger, the same price increase will see fewer customers lost, since those switching to B will now be internalised within

¹³ Carl Shapiro, “Mergers with Differentiated Products”, *Antitrust Law Journal*, spring 1996, pp. 23-30.

the merged entity. A price increase that was unprofitable before the merger may become profitable after.”

146. Since Decision 448 the Commission has further developed its analytical capabilities in respect of cases involving differentiated goods. Diversion ratio calculations, similar to those in Decision 448, have been incorporated into merger simulation software that generates a Bertrand-Nash equilibrium in prices for a given merger.¹⁴ This software was developed according to specifications set out in a recent paper by Epstein and Rubinfeld.¹⁵ In the paper, they propose a technique based on Deaton and Muellbauer’s “Almost Ideal Demand System” (AIDS)¹⁶ that is calibrated by market shares. Hence it carries the moniker, Proportionality Calibrated AIDS or PCAIDS.
147. The PCAIDS model incorporates similar assumptions to those in Decision 448. In particular, it assumes that current market shares come about because of the specific product positioning by brands in the market, and that these brands will not be repositioned in any pertinent spectrum of product characteristic after the merger. Also, it also assumes an absence of entry in response to any post-merger price increases.
148. It is noted that products are differentiated because consumers *perceive* differences in the products. Included are instances where two products may be physically identical, and yet significant numbers of consumers are prepared to pay more for one than for the other.¹⁷ This scenario can arise where products are strongly branded, possibly through advertising, and consumers form preferences for one product over another, perhaps for intangible product characteristics such as image or reputation. Another product characteristic that can be varied, and hence can cause differentiation, is the geographical location of outlets.
149. The Commission considers that the corporate rental car market can be characterised as being differentiated to some degree, by at least the above mentioned factors being strong branding and the physical presence (or lack of same) of front-of-house facilities (booths) at airports i.e. their geographical breadth of coverage.
150. The model requires as inputs the following:
- market shares (as measured by revenue);
 - the market price elasticity of demand; and
 - the own-price elasticity of demand of one of the brands in the market.

A further option is to include estimates of post-merger efficiency gains by the merging parties.

151. The calibration of the model in this case proceeded as follows. As discussed elsewhere the market demand can reasonably be regarded as being relatively price

¹⁴ For a full exposition see Jean Tirole, *The Theory of Industrial Organization*, Harper Collins, 1988, chapter 7.

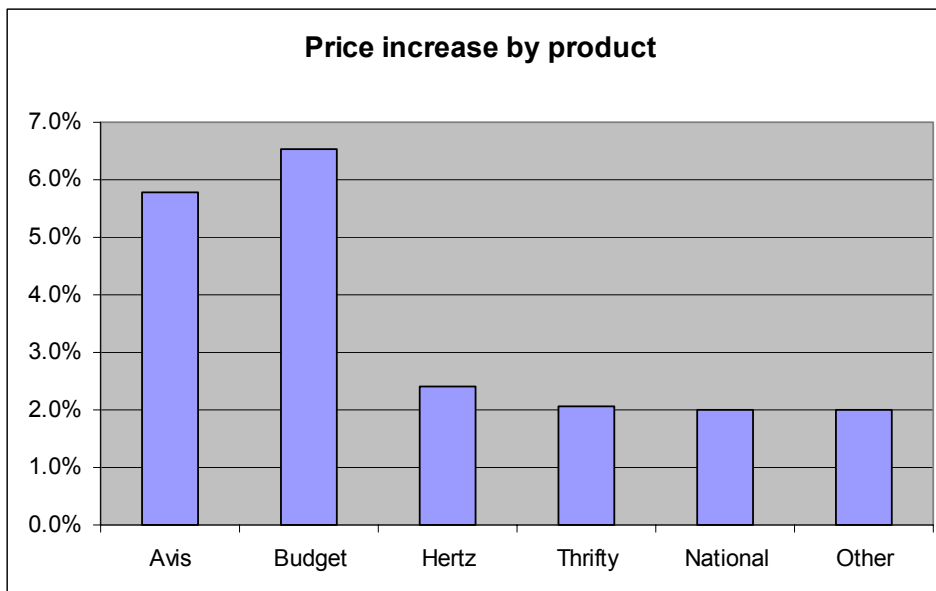
¹⁵ Roy Epstein and Daniel Rubinfeld, “Merger Simulation: A Simplified Approach With New Applications”, *Antitrust Law Journal*, vol. 69, pp. 883-919.

¹⁶ Angus Deaton and John Muellbauer, “An Almost Ideal Demand System”, *American Economic Review*, June 1980, pp. 312-26.

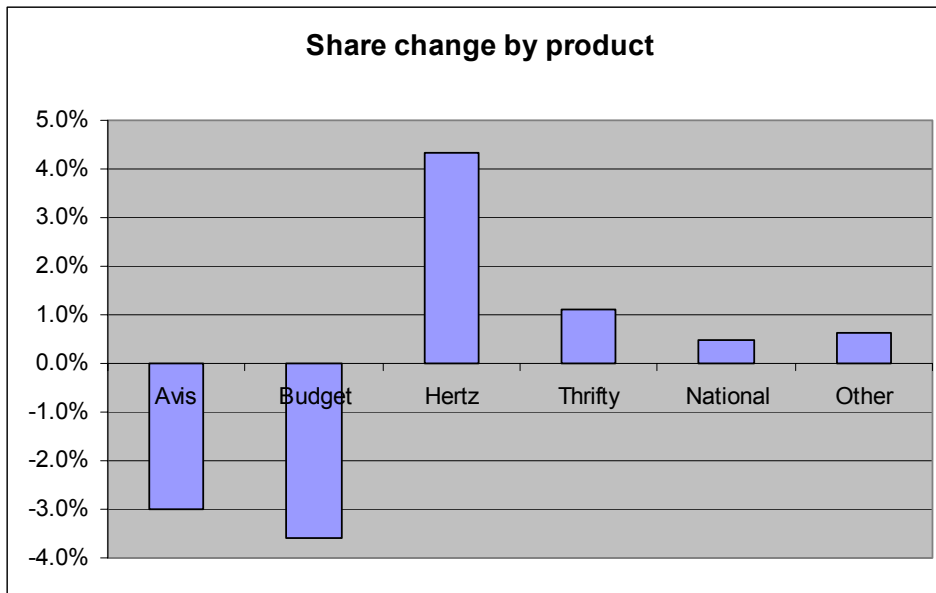
¹⁷ See D. W. Carlton and J. M Perloff, *Modern Industrial Organization* (2nd edition), 1994, p 283.

inelastic. Accordingly, given the absence of empirical evidence, a market elasticity of -0.7 was assumed.

152. Own-price elasticity can, in this context, be regarded as a measure of the degree of product differentiation between competing brands. If products are relatively highly differentiated then the market power of each brand is relatively high, and price response as measured by the own price elasticity is relatively small in absolute terms (ignoring the negative sign). Estimates of own-price elasticities are not available for rental car service brands, but in differentiated product markets such elasticities seem typically to be in the range of -2 to -6. The Commission's view is that the corporate market is differentiated, but not to a high degree. Customers appear generally to regard the brands of the three larger firms as being reasonably close substitutes. However, given the uncertainty, a conservative range of own-price elasticities for Avis of -4, -6 and -8 was used.
153. Cendant's economic consultants, Charles River Associates (CRA), made a submission regarding the use of the model. In it they submitted that more elastic own-price elasticities should be used. Their argument was based on the use of accounting data to estimate price-cost margins, from which they inferred Avis's own price elasticity. The Commission found this debate helpful, but considers that the estimated price-cost margin (and hence the derived elasticity) was highly sensitive to certain assumptions made by CRA. Furthermore, the Commission considered that it was inappropriate to include [] as an element in the calculation of marginal cost. The Commission formed the view that the own-price elasticity is most likely to lie within the -4 to -8 range.
154. Results of simulation runs with the above inputs and assumptions suggested that the proposed merger might result in a weighted average price increase of between 3% and 6.5%. The following graph shows post-merger price increases by brand for an Avis own-price elasticity of -6.



155. In addition to price changes, the model also calculates changes in shares that might result from the predicted price changes. The following graph shows these changes for an Avis own price elasticity of -6.



156. As already noted, one of the assumptions of the model is that other car rental firms will not reposition their brands post-merger in such ways as to compete more strongly with the merged entity, and hence impose a more effective competitive constraint. However, the market [

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157. Charles River also presented an argument that the nature of price-setting in this particular market might undermine a basic assumption of the model, and hence render its use invalid for this case. The argument was that a bidding model would best describe the price-setting behaviour, as car rental firms typically acquire business by tendering for the business of large corporates. Firms do not set a price common to all customers, as assumed in the basic Bertrand model, but rather tailor bids for each customer. The Commission acknowledges that much of the price-setting behaviour in this market does seem to have the character of bidding competition but points out that the alternative model proffered by CRA seems to assume that brands are undifferentiated, which is contrary to a basic feature observed in the market. The upshot of such an approach is that pricing will be at marginal cost, which is the same result as occurs under Bertrand pricing in the absence of differentiation.

158. The use of merger simulation in the Commission's deliberations is still under development. In this instance the model was useful for its ability to focus the parties attention on key assumptions regarding characteristics of the market. The Commission anticipates that its value will be in its ability not to produce 'proof' of a substantial lessening of competition, nor to supplant the Commission's exercise of judgement, but rather in providing support to the Commission's deliberations by:

- focusing parties' attentions on verifiable economic arguments;
- making transparent the values of the key parameters and assumptions in the Commission's analysis; and

- producing quantitative estimates of the results of a given transaction.

Conclusion on Differentiated Product Markets

159. The Commission considers that the potential unilateral market power arising from the differentiated nature of rental car services appears to suggest that there may be a matter of concern post merger, a view that the modelling seems to support. The results of the model are, however, dependent on the fringe participants continuing to provide little constraint on the behaviour of the major suppliers. Before reaching a conclusion on the potential for the exercise of unilateral market power it is necessary to consider the effect the fringe participants would have on market dynamics. The potential of fringe suppliers to constrain post merger behaviour by expansion and re-positioning is discussed below.

Thrifty and National

160. Thrifty and National would be able to satisfy most of the corporates' requirements listed above, but to a lesser extent than Budget, Avis and Hertz.
161. Both have new cars that they lease for an average of [] months and a reasonably sized fleet. However, with fewer than [] cars each, their fleets are not as big as Budget, Hertz and Avis', which increases the risk for corporates of not having a car available, particularly in summer when demand exceeds supply.
162. Their national coverage is not as extensive as that offered by Hertz, Avis and Budget. For example, they would be absent from remote locations such as Hokitika, Greymouth, Gisborne, Whakatane, Kerikeri and Kaitaia. This translates into surcharges for customers to get a car delivered in those remote areas, reflecting the additional cost of providing this service.
163. The Commission also understands that National and Thrifty would not be able to provide the same level of technological sophistication for booking as the three main players. Thrifty mentioned that its customers had more simple needs and for example would not require an integrated reservation system.
164. Furthermore, neither Thrifty nor National is present at all of the three main airport terminals:
- Thrifty has a booth at the Christchurch domestic terminal and at Wellington airport, but none at Auckland airport where it is only allowed to pick up and drop off customers under its license B contract.
 - National has a booth at the Auckland domestic terminal, but is only allowed to pick up and drop off customers at the Auckland international terminal and Wellington and Christchurch airports.
165. Both of them said that not having a booth in each of the three main airports was preventing them from acquiring many corporate customers and increasing their market share. Most of the large corporates confirmed that they required booths at the airports.
166. [

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