

WORKING PAPERS

PRICING STRATEGIES IN THE
NEWSPAPER INDUSTRY

by

W.J. Merrilees

No. 46

November, 1980.

IN ECONOMICS

DEPARTMENT OF ECONOMICS

UNIVERSITY OF SYDNEY

PRICING STRATEGIES IN THE
NEWSPAPER INDUSTRY

by

W.J. Merrilees

No. 46 .

November, 1980.

National Library of Australia Card Number and ISBN
0 86837 029 0

I would like to thank the two Sydney based newspaper firms for their co-operation and especially Mr. Jim Mcpherson, General Manager of Mirror Newspapers (interviewed 18/8/76) and Mr. Noel Hodges, Chief Circulation Manager of the Sun (interviewed 22/4/80). The sales figures were kindly supplied by the non-government body, Audit Bureau of Circulation. Useful comments on the paper were made by a colleague, John Stuckey.

PRICING STRATEGIES IN THE NEWSPAPER INDUSTRY

Three companies (John Fairfax and Sons, Herald and Weekly Times and News Limited) completely dominate the daily Australian newspaper industry, with takeovers having played a spectacular part in the pursuit of dominance. Product differentiation has also been an important competitive weapon. However, here we wish to concentrate on another strategic weapon, namely price. Historically price competition has not played a vital role in inter-firm rivalry in the newspaper industry. This position changed dramatically in the 1975-1980 period in one of the key sectors of the industry - the Sydney market - where rivalry between News Limited and John Fairfax and Sons intensified. In this study we aim to explore the causes of this intensified price competition and evaluate the relative merits of the marketing strategies employed by the two companies involved. Despite an obsession with price as a key decision variable in most economics and management textbooks, very little is known about pricing tactics in real world oligopolistic industries. For a few overseas exceptions see Stigler (1947) Nichols (1951) and Fog (1960).

The Nature of the Newspaper Industry

In this section, two features of the newspaper industry are discussed; its segmented structure and the joint nature of the two main revenue sources (circulation and advertising).

The effect of time, distance and local content coverage serve to explain the highly segmented structure of the Australian newspaper industry. Inter-state sales (except the Herald's penetration of the Tasmanian evening market for which there is no local publisher) are minimal, mainly because of transport costs. Time in particular segments the morning and evening markets.

The joint production nature of newspapers - in which both circulation revenue (from the cover price) and advertising revenue are inseparably produced - warrant special attention. Unlike most joint production situations, the price components of these two revenue

components are inter-related; advertising rates are a function of circulation volume which in turn is a function of cover price. Very little work has been done on the determinants of media prices in Australia. At this stage it is difficult to say whether newspaper advertising rates and other media rates are market - determined (with readership mix, circulation and media competition being important) or conglomerate-determined. Actual transaction advertising rates are difficult to obtain, so our emphasis on cover prices and circulation revenue needs to be tempered with occasional deductions about what has been happening to advertising revenue.

Evolution of Pricing Policies in the Sydney Evening
Newspaper Market, 1941-1980.

There have been several interesting developments in pricing policies in the past forty years. Although emphasising the evening market, it is useful to make cross references to the morning and Sunday markets. These developments can be broken up into chronological epochs and are presented as such.

Stage 1, 1941-1973: An Era of Price Collusion?

Prior to 1941, the market was monopolised by Associated Newspaper's Sun. Mirror Newspapers entered with the Mirror in May 1941 and simply adopted the same price as the Sun. In 1953 John Fairfax and Sons, well established in the morning market with their Sydney Morning Herald, took over Associated Newspapers and the Sun with it. In 1959 the Mirror was taken over for a brief period by a company friendly to John Fairfax and Sons, but was sold in 1960 to News Limited. No further ownership changes have occurred since. None of these ownership changes seemed to make any difference to the infrequent pattern of price changes, as can be seen in Table 1. Nor did the ownership changes alter the salient fact that between 1941 and 1973 the prices of the Sun and the Mirror were identical to the day.

Identical prices over time are consistent with either an overt, collusive agreement or with advance signalling tacit price coordination. From the consumer's perspective it probably does not matter which price system is causing identical prices. From a behavioural perspective the difference is noteworthy, while from a legal perspective the difference is controversial. Currently collusive agreements are illegal while the legality of 'non-collusive' parallel pricing is obscure. Just as identical prices do not prove collusion, nor do unequal prices disprove collusion. Fog (1960, p. 156) gives an example of three Danish firms whose collusive oral agreement stipulates that agreed price increases were not to be made simultaneously so that it would look as if there were no mutual agreement.

Price agreements were very common in Australia in the 1950's and 1960's and were legal in most cases. There is some evidence⁽¹⁾ that newspapers was one of the many industries where collusive agreement flourished. To further substantiate this view, I checked the announcement dates of price increases for the Sun and Mirror over the 1964-1974 period. Both papers gave simultaneous notice of two, five and four days for the 1964, 1970 and 1974 price increases. This can only be construed as joint announcements of mutual agreements.

Instead of price competition, the emphasis had been on non-price policies. Each evening paper has come out with all sorts of innovations and style changes (using sporting celebrities, competitions, racing form liftout guides, etc) and the other has usually been quick to imitate.

Stage 2 1974-1975 : From Price Collusion To Price Leadership

While the notion of 'collusive agreement' is likely to be construed in terms of a clear, predictable and watertight system of industry price control, there are well known reasons why cartel-type agreements break down. Conflict between members of a co-operative agreement occurs for all sorts of reasons—different cost structures, different objectives, power struggles, etc.

Although a bargaining process underlies collective agreements, it seems likely that one firm plays a dominant role. We have no direct knowledge of which was the dominant firm in the newspaper price agreement. However, as of the mid-1960's it was probably John Fairfax and Sons. Fairfax dominated the Sunday market, had an equal share of the evening market and was well represented in the morning market. No other firm was in all three markets. The S.M.H. (Fairfax) led the Telegraph (Packer) in the 1964 market price change.

The arrival of the Australian in 1964 and News Limited's 1972 takeover of the Telegraph radically changed the status quo. There are clear signs that Rupert Murdoch (News Limited) had become the dominant member of the price alliance in the 1973/74 period; as revealed in the morning and Sunday markets.

Suddenly and beyond the control of either firm, Murdoch's dominant position was erased. The July-September 1974 Prices Justification Tribunal's public inquiry into John Fairfax and Son's proposed price increases, thrust this company and the newspaper industry generally into the limelight. There was no way other newspaper firms could get their price increases approved by the P.J.T. until the Fairfax case concluded. As can be seen in Table 1, on two occasions in late 1974, the Mirror had little choice other than follow in the wake of government announced Sun price rises. Similarly in the Sunday market the Sun-Herald led the Sunday Telegraph in 1974/75 rises to 12 and 15 cents. In the morning market, as can be seen in Table 2, the S.M.H. seemed to lead the rises to 9, 10 and 12 cents up to June 1975. Although the Australian sneaked in first at the 10 cents level, the Telegraph lagged behind the Herald in a more important show of strength.

Adding to the confusion from the September 1974 P.J.T. decision was the more or less simultaneous emergence of the tougher 1974 Trade Practices Act, which made price agreements illegal. By default, this left price leadership as the only effective means of price co-ordination. There was no way Murdoch could negotiate his way back to dominance and the P.J.T. system was creating a treadmill reinforcing Fairfax's price leadership.

This treadmill lasted for about nine months and there is little doubt that Murdoch did not like his followership role.

Stage 3 Mid-1975 : The First Shots of a Price War

On July 7, 1975, after 34 harmonious years, price co-ordination collapsed in the evening market. The Sun increased its price from 10 to 12 cents, but the Mirror did not follow. What sparked off this price war?

Discovering the cause of the price war is complicated by the difficulty of assigning the initiating role to a particular firm. Ostensibly the Sun made the first move by raising its price to 12 cents. Yet by not following this rise, the Mirror was effectively cutting price. At least this is true in an inflationary milieu when inaction amounts to a price cut in real terms. Our difficulty in identifying an initiator to the price war is echoed in my interviews with managers of the two newspapers. The Mirror manager saw their role as purely passive, with the Sun initiating the price differential, while the Sun manager saw the Mirror as the aggressor.

Although technically the Sun did create the initial price differential, it is clear that it did so in a non-threatening way. Indeed, few if any price increases are threatening in the way price cuts can be. Moreover, the ultimate price retreat by the Sun suggests that it originally believed the Mirror would follow the rise to 12 cents. The Sun's expectations in this regard were confirmed in my interview; the whole industry (including the Sun, newsagents etc) expected the Mirror would quickly follow to 12 cents. Thus we need to seek out the Mirror's motivation in initiating price competition. The fact that the Mirror manager denied initiating the price war made it difficult to pursue this line of thought directly with the Mirror. We are therefore forced to proceed indirectly, with four hypotheses checked for plausibility. The first hypothesis is the least plausible, the next two hypotheses acted as catalysts in the price war while the fourth hypothesis is seen as fundamental.

- (a) It has been argued (Wiltshire and Stokes, 1977) that the editorial quality of a newspaper tends to be higher, the greater the relative contribution from circulation revenue to total revenue. Given the tendency of the Sun to play up its image as a quality paper relative to the Mirror, it is possible that the Sun is more concerned with a higher cover price to raise circulation revenue (given inelastic demand). This hypothesis is rejected outright. In its July 1974 P.J.T. submission, John Fairfax requested a higher percentage rise in advertising rates compared to cover price. Additionally, in the interview, the Sun manager did not rank the issue of any importance.
- (b) The introduction of the 1974 Trade Practices Act provided a fillip to price experimentation. Several quick and punitive Trade Practice decisions made it clear to all firms that the rules of the game had changed. No doubt many firms reframed their attitude to competition.
- (c) The failure of the Mirror to match the July 1975 price rise could reflect the uniqueness of the Sun's production cost changes, or at least the magnitude of such. Newsprint is a major component of the cost of newspapers. In Australia A.N.M. (Australian Newsprint Mills) has a monopoly of newsprint production, though with low rates of duty, imports are important. Most major Newspaper publishers, including Fairfax, were vertically integrated backwards into A.N.M. as of 1972/73. However, from 1972, News Limited did not have a holding in A.N.M.
- In June 1966 A.N.M. began ten-year contracts with its customers, which provided for small annual increments in prices. With the acceleration of inflation in the early 1970's, these long-term contracts placed A.N.M. in a desperate financial situation. In 1972/73 A.N.M.'s customers voluntarily agreed to pay more for their newsprint, to ensure the survival of A.N.M. and hence the continuity of future supplies. The fact that most customers were also owners no doubt further prompted this gesture. News Limited, as a non-owner customer, did not join in with a

voluntary price rise to A.N.M. to the displeasure of the rest of the industry. Apart from pecuniary motive, Murdoch's 'non-altruistic behaviour' was no doubt influenced by a long standing rift between the Mirror and A.N.M.

Thus the costs of newsprint for the Sun (and other Fairfax papers) rose much faster than those of the Mirror (and other News Limited papers) over the 1973-76 period. The saving to News Limited over this period amounted to about \$6 million, spread over all papers including the Mirror.⁽²⁾ The windfall cost differential between the Sun and the Mirror provided useful leverage for Murdoch to conduct his pricing strategy.

- (d) In our previous section (Stage 2), the discussion suggested that, as of mid 1974, News Limited was the dominant member of a collusive price agreement in the Sydney newspaper markets. In the evening market, the Mirror had a marginal edge over the Sun. In the morning market, News Limited's Telegraph had a substantial lead over Fairfax's S.M.H., with another paper (the Australian) in support. In the Sunday market, the combined sales of the Sunday Telegraph and Sunday Mirror greatly exceeded those of the Sun-Herald. Yet from mid 1974 to mid-1975, by a quirk of government intervention (the P.J.T.), John Fairfax and Sons had been elevated to price leader.

There is little doubt that News Limited was unhappy about being forced into a followership role, especially given the all-embracing marketing aspirations of Rupert Murdoch. Compounding this ill-feeling is the possibility that News Limited was uneasy about the frequent price rises initiated by Fairfax during 1974-75, with three rises in nine months. This went against the historical pattern of gradual adjustment. The fact that inflation was the villain is irrelevant. By increasing the need for more frequent adjustment, inflation created the uncertainty in which the quality of price leadership might be questioned. The more frequent the price adjustment, the greater is the scope for misunderstanding from rivals.

Thus, for a variety of reasons, Rupert Murdoch was keen to regain his price leadership title. As a superb strategist, it is certain that he carefully considered the questions of when, how and where the challenge should take place. The question of 'when to challenge was presumably 'as soon as possible.' By mid-1975 the awe and power of the P.J.T. was waning so this was an appropriate time to stop the treadmill.

'How' to challenge a price leader involves three pricing options: initiating a price rise, initiating a price cut or by not following the established price leader. The first option could backfire if the 'price-leader' (Fairfax as of mid-1975) did not match the move, forcing a retreat by the rebellious 'follower.' The second option is limited by potential resistance from newsagents in the retail market. With newsagents' gross margin proportional (usually 25%) to the cover price, they could have hampered distribution of the Mirror if its price were too low. At least one low price paper (the Melbourne Daily Morning Post, 1925-27) had been killed off by a newsagents' boycott. This leaves the third option as the preferred tactic and is the one chosen by Murdoch; when the price of the Sun went up in July 1975, he did not follow.

'Where' to strike was essentially a choice between the morning and evening markets. The evening market was preferable for two reasons. First, it seemed likely that the cross elasticity of demand was greater in the evening market because of a higher casual/contract sales ratio and because product differentiation seemed less than in the morning newspapers. As of mid-1975 this was an untested hypothesis because the absence of a price differential in the previous 34 years prevented empirical measurement of cross demand elasticities. Secondly, traditionally there had been a minimal (if any) lag between changes in the prices of the Sun and Mirror, whereas in the morning market a lag of two or three months had been common. Therefore a policy of not following a Fairfax price lead would have had the quickest impact in the evening market. Within a couple of weeks of the Sun's price rise on July 7, 1975 it was clear that News Limited was not following, whereas it would have taken months after the Herald's price rise on June 2, 1975 to get the same message across. The time, means and place had been successfully plotted for a leadership challenge.

In summary, an attempt to regain the price leadership position from Fairfax seems to have been the overriding motivation behind the 1975 price war. However, News Limited's move received encouragement from the 1974 Trade Practices Act and a temporary windfall in the cost of newsprint.

Stage 4 1975-1979 : The Battle; Its Effect on Market Shares

The price war lasted more than 3½ years, from July 1975 to January 1979. The Mirror's price of 10 cents lasted five years, from November 1974 to November 1979. Both of these figures are quite amazing when one considers that inflation averaged 10% p.a.

Like most oligopolistic price wars, it was not a case of price changing continuously. Rather there was one discrete change which was then maintained. This pattern is similar to recent price wars in the margarine industry, with prices taking one or two downward moves, reaching a zero or negative profit situation very quickly. Notwithstanding, in the Sun-Mirror case, the prologned nature of the conflict could lead one to interpret the price cutting process as continuous for both the Mirror and Sun; at least in real terms.

In analysing the economic effects of the price war, most interest focuses on changes in market shares. In this regard we are fortunate to have reliable (audited) data by firm on a continuous (six monthly) basis. Table 3 records the changes in firm sales and market shares over the 1973-1980 period.

Prior to the July 1975 price changes, the sales of the two evening newspapers moved in a near parallel fashion, with market shares virtually constant. Minor fluctuations in market shares can be attributed to publishing problems (industrial relation problems), distribution problems (petrol or transport strikes), random distributions in front page stories between the two papers and inter-firm variations in promotion.

In fact, given the virtual constancy of market shares prior to July 1975, one is tempted to attribute most of the post July 1975 market share variations to the emergence of a price differential. Thus, as a first approximation, the price differential appears to have increased the Mirror's market share from 50.1% in the period ending March 1975 to 54.1% in the six months period ending March 1977; about four percentage points. While this method is crude, it seems reasonable in light of prior market share behaviour in the industry. Moreover the method is indistinguishable from the 'experimental approach' underlying Reckie's (1976) U.K. results.

Adding to the plausibility of the crude method is the apparent symmetry between the creation and removal of the price differential. Thus nine months after the establishment of the price differential, the Mirror's market share increased by 3.1 percentage points. Eight months after the price differential was removed, the Mirror's market share decreased by 2.5 percentage points.

These estimates can be checked using more refined empirical tests. The availability of price and market share time series data enables us to use regression analysis. With a relatively small sample ($n = 15$) there is no guarantee that the more sophisticated regression technique is more reliable than our crude method. However our hypothesis that recent variations in market shares are dominated by one systematic influence (relative product prices) and many random influences, makes regression analysis a particularly attractive tool.

The only non-price variable considered was a simple dummy advertising variable (a value of one for the six months ending September 1976 and zero otherwise). This corresponds to the peak in the Sun's promotional activities, so we would expect it to have a significantly negative impact on the Mirror's market share. In other periods the advertising of one firm has usually been sterilised by the advertising expenditures of the other firm, with little net impact on market shares.

A variety of lag structures was tried, but the best results were obtained by just adding a lagged price variable to the current price variable.

The sum of the price coefficients in the least squares regression in Table 4 is about 17, which means that a 100% change in relative product prices would, ceteris paribus, change the Mirror's market share by 17 points. Thus a 20% increase in the Sun's relative price would tend to raise the Mirror's market share by about $3\frac{1}{2}$ percentage points; which is not greatly different from our 'eyeball' estimate. Relative prices explain about 90% of the 1973-1980 variations in market shares in the evening newspaper market. The Durbin-Watson statistic is satisfactory, indicating that omitted influences are minor and fairly random. Nearly three quarters of the market adjustment occurs within the first six months of a relative price change, with effectively all of the adjustment within a twelve month period.

The effectiveness of the Sun's advertising campaign can be crudely evaluated by the dummy variable in the Table 4 results. Nominally the coefficient is about - 0.6, which means that the Mirror's market share fell about 0.6 percentage points during the peak of the Sun's campaign. In absolute terms this represents about 4,000 copies per issue. In light of the weak statistical significance of the advertising dummy variable, even 4,000 copies may be on the high side. Thus although partly successful, it does not fare well in cost-benefit terms, which is why the Sun did not maintain its advertising at the 1976 level.

A similar market share analysis has been carried out for the morning market, the results of which are also included in Table 4. No lagged effect is evident here and relative prices explain very little of the 1973-1980 variations in market shares. The price coefficient is at best marginally significant from zero and only a tenth of the size of the corresponding coefficient in the evening market. Clearly the two morning newspapers are segmented from each other, while the two evening newspapers are reasonably close substitutes with each other.

In summary, the relatively lower price of the Mirror over the 1975-1979 period apparently raised its market share by about $3\frac{1}{2}$ percentage points (i.e. 7 percent). In the morning market the relatively lower price of the S.M.H. apparently raised its market share by about half a percentage point (i.e. one percent) over the 1976-1978 period.

Stage 4 Continued. 1975-1979: Tactics During the Battle

The Mirror's tactics over the 1975-1979 period concentrated on price competition in the evening market, backed up by discontinuous bursts of advertising which emphasised price. As we saw in the previous section, this pricing strategy added about seven percent to the Mirror's sales in relatively quick time. Figures supplied by the Mirror indicate that in the twelve months ending June 1976, the Mirror's advertising volume increased and the Sun's advertising volume decreased. Compounding this is the likely greater rise in the Mirror's advertising rates, resulting from increased circulation.

The advantage of delineating the Sydney newspaper market becomes clear when we discover that News Limited simultaneously employed the opposite strategy in the morning and Sunday markets. In these markets, from late 1976 (see Table 2), News Limited led John Fairfax in increasing prices. Several factors underlie this opposite strategy. First, as of mid-1976, the Australian newspaper had been operating at heavy losses (\$3 million p.a.) which required special attention, namely hefty cover price increases. Secondly, the strategy fits the objective of News Limited to regain the overall price leadership. With prices deadlocked in the evening market, News Limited had an open hand to initiate changes in the morning market. Thirdly, the opportunity cost to News Limited from pushing price in the morning market was minimal in light of the likely small own and cross price elasticity of demand. Fourthly, another factor stems from the uncertainty in which the evening newspaper price war was couched. News Limited lacked experience in price experimentation, so the morning market provided a useful hedge in case events did not go to plan.

The Sun's tactics were altogether different. Its early competitive response to the Mirror's attack was not the orthodox price matching move, but rather an intensified advertising campaign. Presumably Fairfax was not in a hurry to relinquish its price leadership role and therefore resisted surrendering to Murdoch's challenge. This proved to be a costly mistake, with heavy declines in circulation, advertising volume and advertising revenue, which were only partially offset by the gain in circulation revenue

(a 20% increase in price and an 7% loss in sales volume). Fairfax's Sydney newspapers (notably the Sun) recorded a loss in its company reports over the 1975-1978 period.

In a subtle way, the Sun's advertising response can be interpreted as a pricing strategy. Many oligopolistic firms, employ product segmenting techniques, whereby brands are differentiated on the basis of real or imagined quality. Frequently the brand price structure reflects or even identifies the segmented range of brands. Given that the Sun's advertising extolled its quality, we have some basis for interpreting this as part of a product-price segmentation tactic. As we have shown in the previous section, the Sun's promotional campaign was not particularly successful. Apart from the Mirror's likely advertising retaliation, the chances of discovering many Mirror-buying, quality-seeking, unexposed-to-the-Sun, readers, as of 1976 must have been minimal.

Although the Sun's emphasis on advertising rather than price in the evening market was a strategic error, so too was its emphasis on price in the morning and Sunday markets. As can be seen in Table 2, the Telegraph followed the S.M.H. in price rises to 13, 14, 15 and 20 cents. For the first three of these, the lag in Fairfax's response was 7, 11 and 12 months respectively. This is most puzzling. What was Fairfax trying to do? It would seem that Fairfax was playing the Murdoch game with a slightly different slant; by following the Telegraph with an increasingly long lag, the Herald offered the threat that one day it may not follow at all. It certainly seems a cumbersome, though intriguing alternative to what Murdoch did with the Mirror after July 1975. Unfortunately, as we have now confirmed, the morning and evening markets are quite different. The lower S.M.H. price over the 1976-1978 period cost the Telegraph less than one percent of its sales volume and equally little advertising volume or revenue.

Stage 5 1979-1980: The End of the Battle But Not The War

On January 15 1979, backed by a large \$500,000 advertising campaign, the Sun retreated to 10 cents. This signalled a tactical victory to Murdoch. Until the Mirror had been appeased, the Sun was unable to increase its price beyond 12 cents. Thus Fairfax's price lead move to

12 cents proved abortive and indeed the next round of price increases to 15 cents in November 1979 were led by News Limited.

In the previous section we have criticised Fairfax's tactics. Three and a half years was a long time to retreat on price. The emphasis on advertising was criticised as being ineffective in raising market share and also for inappropriately deploying funds which could have been used to finance a price war. In recent margarine price wars, by contrast, most firms severely trimmed their advertising budgets during the peak of the war. One suspects that the conglomerate media of interests of Fairfax in Sydney - in radio (2GB), television (channel 7) and other specialised papers (Financial Review and National Times) - contributed to an inappropriate marketing strategy. Without the ready and cheap access to the media (including the Sun itself), Fairfax might have been quicker to match the Mirror's price. However, this does not explain Fairfax's inappropriate marketing strategy in the morning market, where it incorrectly emphasised price. In contrast, News Limited developed appropriate policies in both the evening and morning markets.

Although the 1975-1979 price battle was won by News Limited, who demonstrated their newly won price leadership in initiating the November 1979 price increase, events in 1980 made it clear that the struggle was not over. On June 30 1980 John Fairfax gave a weeks notice that the price of the Sun was to rise to 20 cents. The Mirror's counterpart announcement followed two days later. With the convenience of 'one coin shopping' and ground lost to inflation since 1974, there was perhaps little doubt about whether the Mirror would match the move to 20 cents. As things stand, Fairfax has cleverly sneaked back in as price leader in the evening market. However, the next price round will be a more definite test of strength.

Postscript: Some Implications For Non-Price Competition

A useful by-product of a pricing study is the light it sheds on non-price aspects of industry behaviour. Our cross price elasticities suggest that the morning newspapers have implemented product segmentation to a considerable degree, while the evening newspapers have primarily

followed a policy of imitation. Before examining the implications of these results there is one as yet undiscussed matter concerning the sources of the relatively higher cross price elasticity in the evening market. Is it mainly due to less product differentiation between papers or has the result been unduly influenced by the one coin convenience dimension (affecting both the initial divergent move by the Sun and the eventual retreat back to 10 cents)? If the latter is important than our estimated price coefficients overstate the degree of uniformity between the Sun and the Mirror. Certainly the 1979 campaign by the Sun and to a much lesser extent the 1975 campaign by the Mirror emphasised the convenience of one coin shopping; a virtue echoed in my interview with the Sun manager: Personally I do not rate the convenience dimension as vital, partly because change was often still required (albeit slightly faster) when the price was 10 cents and because 'newsboys' can become fairly adept at giving change. More fundamentally, if Fairfax believed that the major cause of their market share fall over the 1975-1979 period was the convenience factor, why did they regard 12 cents as a ceiling cover price for the Sun? With the once and for all effect of convenience used up, why couldn't they increase price to 13 or 14 or 16 or more cents? These higher prices would have greatly increased circulation revenue, assuming (as the convenience argument does) that the own and cross price elasticities are close to zero. Indeed, in 1979, instead of going back to 10 cents why didn't Fairfax move the price of the Sun to 20 cents, as in fact it moved to about a year later?

Two important issues are raised by our results. First, is the greater degree of product differentiation in the morning market inevitable in the light of attributes of a morning newspaper? Economists have barely begun the task of explaining product differentiation (c.f. Comanor, 1967 and Porter, 1974). However, it is clear that Hotellings' (1927) famous prediction about non-price policies always converging to a common denominator works well for commercial television,⁽³⁾ domestic airlines and evening newspapers and badly for morning newspapers. What explains such differences? Secondly, what are the welfare implications of product variety? This subject too has received little research effort (Scherer 1979). Yet in our context, with more and more newspapers disappearing, the question is vital. Our results suggest that the welfare loss of a Sydney morning paper folding are

likely to be greater than if a evening paper folds. Yet even in the evening market the apparent cross elasticity of demand is not all that high (about 0.4), so the majority of readers are not indifferent about which paper they buy. To date, studies of non-price competition (especially advertising) have been almost exclusively firm-orientated, with not enough attention to consumers.

TABLE 1: Cover Prices in the Sydney Evening Newspaper Industry, 1930 - 1980

Date of Change	Price of the Sun (Cents)	Price of the Mirror (Cents)
1930, Aug. 4	1.3	-
1940, Feb. 5	1.7	-
1941, May 12		1.7 (entry)
1949, Sept. 12	2.5	2.50
1951, Mar. 12	3.3	3.3
1956, Oct. 8	4.2	4.2
1964, Sept. 14	5.0	5.0
1970, Mar. 31	7.0	7.0
1974, Jan. 21	8.0	8.0
1974, Sept. 30	9.0	-
1974, Oct. 1	-	9.0
1974, Nov. 25	10.0	-
1974, Dec. 10	-	10.0
1975, July 7	12.0	
1979, Jan. 15	10.0	
1979, Nov. 1	15.0	15.0*
1980, July 7	20.0*	20.0

NOTE: * Denotes price leader in terms of the first firm to announce a price rise, effective on the same date for both firms.

SOURCES: John Fairfax and Sons, Mirror Newspapers, and Mitchell Library, Sydney.

TABLE 2: Price Rounds in the Sydney Morning Newspaper
Market, 1970 - 1980

Price level	Price Leader	Price Follower	Lag (weeks)
7 cents	Telegraph May 11 1970	S.M.H. June 1970	4
8 cents	Telegraph April 23 1973	S.M.H. June 25 1973	8
9 cents	S.M.H.* Sept 30 1974	Telegraph Sept 30 1974	0
10 cents	S.M.H. Jan. 13 1975	Telegraph Feb. 17 1975	5
12 cents	S.M.H. June 2 1975	Telegraph July 28 1975	7
13 cents	Telegraph Dec. 20 1976	S.M.H. July 11 1977	29
14 cents	Telegraph Mar. 21 1977	S.M.H. Feb. 27 1978	49
15 cents	Telegraph Oct. 3 1977	S.M.H. Sept. 25 1978	51
20 cents	Telegraph* Feb. 8 1980	S.M.H. Feb. 8 1980	0

NOTES: * prices effective the same date, but earlier announcement.
The Australian newspaper represents about 6% of the Sydney market. If included it led the price rises to 10 cents (9/12/74), 15 cents (11/9/76) and 20 cents (July 1977).

SOURCES: As in Table 1.

TABLE 3: Sales and Market Shares in the Sydney Evening Newspaper Industry, 1973 - 1980

Six-monthly Period Ending:	Average Sales of Mirror	Average Sales of Sun	Mirror's Market Share (%)
March 1973	349,522	347,437	50.2
September 1973	361,549	352,709	50.6
March 1974	304,317	301,017	50.3
September 1974	369,153	364,288	50.3
March 1975	358,836	356,994	50.1
September 1975	379,081	340,434	52.7(a)
March 1976	371,944	326,990	53.2
September 1976	389,078	341,754	53.2
March 1977	375,107	318,370	54.1
September 1977	377,508	328,731	53.5
March 1978	361,615	318,558	53.2
September 1978	391,393	331,530	54.1
March 1979	387,173	338,511	53.4(b)
September 1979	399,450	374,726	51.6
March 1980	361,520	342,284	51.4

NOTES: (a) Half of this six month period involved a newly established price differential.
 (b) The last two months of this six month period involved the elimination of the price differential.

SOURCE: Sales figures from Audit Bureau of Circulation.

TABLE 4: Market Share OLS Regressions, 1973 - 1980
(semi - log specification)

MARKET SEGMENT	CONSTANT	RELATIVE PRICE	LAGGED RELATIVE PRICE	ADVERTISING DUMMY	R ²	D.W.
Evening	-26.3 (3.16)*	16.72 (9.42)*		-0.55 (0.91)	0.89	1.09
Evening	-30.4 (3.76)*	12.66 (4.39)*	4.94 (1.70)	-.64 (1.13)	0.91	1.66
Morning	49.1 (14.1)*	0.05 (1.54)			0.15	0.70
Morning	48.5 (12.1)*	0.04 (0.9)	0.02 (0.4)		0.16	0.68

NOTES: * indicates significant at 5% level, L.H.S. is market share in percentage point of Mirror (evening) or Telegraph (morning).
R.H.S. is the log of relative price, either the Sun to Mirror price ratio (evening) or the Herald to Telegraph price ratio (morning).

FOOTNOTES

1. c.f. Hunter (1961) and Sheridan (1974), p. 14.
2. For further discussion see Davidson and Stewardson (1979), especially pp. 142-146.
3. For a British example, see Steiner (1961). The Hotelling model is summarised in Lipsey (1979), pp.318-320.

REFERENCES

- Comanor, W., (1967) "Market Structure, Product Differentiation and Industrial Research", Quarterly Journal of Economics, vol. 81 November, 301-310.
- Davidson, F. and B. Stewardson., (1979) Economics and Australian Industry, 2nd Edition (Longman Cheshire).
- Fog, B., (1960) Industrial Pricing Policies, (North Holland).
- Hotelling, H., (1929) "Stability in Competition," Economic Journal, Vol.39, 41-57.
- Hunter, A., (1961) "Restrictive Practices and Monopolies in Australia," Economic Record, vol. 37, March, 25-52.
- Jones, R., (1980) "The Sydney Newspaper Industry" in C. Terry (ed) Australian Microeconomics (Prentice-Hall) 81-98.
- Lipsey, R., (1979) Positive Economics (Weidenfeld and Nicolson).
- Mayer, H., (1964) The Press in Australia (Lansdowne Press).
- Nicholls, W., (1951) Price Policies in the Cigarette Industry (Nashville, Vanderbilt Press).
- Porter, M., (1974) "Consumer Behaviour, Retailer Power and Market Performance in Consumer Goods Industries," Review of Economics and Statistics, vol. 56, November, 419-436.
- Reckie, W., (1976) "The Price Elasticity of Demand for Evening Newspapers," Applied Economics, vol. 8, March, 69-79.
- Scherer, F., (1979) "The Welfare Economics of Product Variety: An Application to the Ready-to-Eat Cereals Industry." Journal of Industrial Economics, vol. 28, December, 113-134.
- Sheridan, K., (1974) The Firm in Australia, (Thomas Nelson).
- Steiner, P., (1961) "Monopoly and Competition on T.V.," Manchester School.
- Stigler, G., (1947) "The Kinky Oligopoly Demand Curve and Rigid Prices," Journal of Political Economy, vol. 60, 432-449.
- Wiltshire, K., and C. Stokes, (1977) Government Regulation In The Printed Media Industry, (Committee for Economic Development of Australia CEDA).

WORKING PAPERS IN ECONOMICS

- * 1 I.G. Sharpe A Framework for Analysis of the Money Supply Process in Australia
- * 2 I.G. Sharpe & R.G. Walker Asset Revaluation and Stock Market Prices
- * 3 N.V. Lam Incidence and Stabilization Impact of Tin Export Taxation in West Malaysia
- * 4 V.B. Hall & M.L. King Inflationary Expectations in New Zealand: A Preliminary Study
- * 5 A.J. Phipps Strike Activity and Inflation in Australia
- 6 N.V. Lam Incidence of the Rice Export Premium in Thailand
- * 7 I.G. Sharpe Secondary Reserve Requirements, the Monetary Base and the Money Supply in Australia
- 8 P. Saunders Labour Demand Functions and the Quasi-Fixity Hypothesis: Some Empirical Results for U.K. Manufacturing Industries, 1963-1974
- 9 W.P. Hogan Economic Strategies for Recovery
- 10 T.P. Truong Asset Revaluation and Share Prices: A Study using the M.S.A.E. Regression Technique
- 11 S. Kim Instability of Primary Exports, Income Stabilization Policies and Welfare
- *12 I.G. Sharpe & P.A. Volker Institutional Change, Specification Error, Inflation and the Stability of the Demand for Money Function in the United States, 1901-1974
- *13 I.G. Sharpe & P.A. Volker The Impact of Institutional Changes on the Australian Short-Run Money Demand Function
- *14 W.P. Hogan The Connections Between Foreign Trade and Economic Development: An Empirical Study
- *15 F. Gill The Case of the Black Exodus from the Southern U.S., 1910-1970: Some Lessons for Theory and Applied Theory
- *16 A.J. Phipps The Impact of Wage Indexation on Wage Inflation and Strike Activity in Australia
- *17 V.B. Hall Pricing Behaviour in Australia: A Data Evaluation Study
- *18 I.G. Sharpe Australian Money Supply Analysis: Direct Controls and the Relationship Between the Monetary Base, Secondary Reserve and the Money Supply
- *19 L. Haddad Economic Systems: Towards a New Classification
- 20 G. Lewis A Strategy for Winning at Roulette

- 21 R.L. Brown A Test of the Black and Scholes Model of Option Valuation in Australia
- * 22 V.B. Hall Pricing Behaviour in Australian Manufacturing Industry: Hypothesis Testing 1955-1956 to 1967-1968
- *23 I.G. Sharpe & P.A. Volker The Selection of Monetary Policy Instruments: Evidence from Reduced Form Estimates of the Demand and Supply of Money in Australia
- *24 V.B. Hall Excess Demand and Expectations Influences on Price Changes in Australian Manufacturing Industry
- *25 I.G. Sharpe & P.A. Volker The Tradeoff Between Improved Monetary Control and Market Interest Rate Variability in Australia: An Application of Optimal Control Techniques
- *26 Evan Jones with the assistance of Mary MacDonald An Examination of Earnings Differentials in Australian Manufacturing Industry
- 27 W.P. Hogan Questions on Structural Adjustment Policies
- 28 P. Saunders Price and Cost Expectations in Australian Manufacturing Firms
- 29 W.P. Hogan, I.G. Sharpe & P.A. Volker Regulation, Risk and the Pricing of Australian Bank Shares 1957-1976
- 30 W.P. Hogan Quicksands of Policy-Making
- 31 C. Emerson Taxing Natural Resources Projects
- 32 R.W. Bailey, V.B. Hall & P.C.B. Phillips A Small Model of Output, Employment, Capital Formation and Inflation, applied to the New Zealand Economy
- 33 W.P. Hogan Eurofinancing: Currencies, Loans and Bonds
- 34 S. Adee The Growth of Foreign Investment and Economic Nationalism in Post Independence Ghana: 1957-1975
- 35 W.P. Hogan The 40 Per Cent Investment Allowance
- 36 W.P. Hogan Controlling Eurofinance Markets
- 37 R.T. Ross Disaggregate Labour Supply Functions for Married Women: Preliminary Estimates for New Zealand
- 38 U.R. Kohli Beginning- and End-of-Period Specifications of Asset Market Equilibrium in Balance-of-Payments

- 39 G. Mills Government Incentive Contracts with Private Companies: Some Lessons from the Channel Tunnel
- 40 C.G.F. Simkin Closer Economic Relations Between Australia and New Zealand
- 41 U.R. Kohli Relative Price Effects and the Demand for Imports
- 42 W.J. Merrilees Alternative Models of Apprentice Recruitment: with Special Reference to the British Engineering Industry
- 43 P. Saunders Price Determination in Australian Manufacturing Firms: A Cross-Section Study
- 44 W.P. Hogan Immigration Policies and Issues
- 45 W.J. Merrilees Labour Market Segmentation in Canada: A Translog Approach
- 46 W.J. Merrilees Pricing Strategies in the Newspaper Industry

Papers marked with an asterisk are out of stock. Copies of the others are available upon request from:

Department of Economics
The University of Sydney
N.S.W. 2006

Working Papers in Economics that have
been accepted for publication elsewhere

- 2 I.G. Sharpe &
R. G. Walker Journal of Accounting Research,
Fall, 1975, 293-310.
- 3 N. V. Lam Journal of the Developing Economies
Vol. 17, No. 1, March 1979.
- 4 V. B. Hall &
M. L. King New Zealand Economic Papers, 1976,
118-51.
- 5 A. J. Phipps Economic Record, September 1977,
297-319.
- 6 N. V. Lam Journal of Development Studies
Vol. 14, No. 1, October 1977.
- 7 I.G. Sharpe Australian Journal of Management,
April 1976, 85-106.
- 9 W. P. Hogan Economic Papers, No. 55, The Economic
Society of Australia and New Zealand,
29-57.
- 13 I. G. Sharpe &
P. A. Volker Kredit und Kapital, Vol. 12, No. 1,
1979
- 14 W. P. Hogan Some Calculations in Stability and
Inflation, A.R. Bergstrom et.al. (eds.),
John Wiley and Sons, 1978.
- 21 R. L. Brown Australian Journal of Management,
Vol. 3, No. 1, April 1978, 17-36.
- 23 I.G. Sharpe &
P. A. Volker The Australian Monetary System in the
1970s, M. Porter (ed.), Supplement to
the Economic Record, 1978.
- 24 V. B. Hall Economic Record, Vol. 56, No. 152,
- 27 W. P. Hogan "Divising Structural Adjustment
Policies, Malayan Economic Review,
Vol. 24, No. 1., pp. 69-81.
- 30 W. P. Hogan Australian Economic Papers, Vol. 18,
No. 33, December 1979.