Magazine Publishing - A Quiet Life ?
The Dutch Market for Consumer Magazines *

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This version is different from the original in the way we formulated the Audax-Edipress case in section 4.3

1 Introduction

According to the semi-annual publication *Handboek van de Nederlandse Pers en Publiciteit* (Nijgh Periodieken), the Dutch consumers currently face about 8,000 domestic magazines. During the 1990s Dutch publishers launched between 400 and 500 new titles a year on average, while taking around 150 titles from the market (Bakker and Scholten, 1997, p. 35). As such, the Netherlands is the country with the largest number of domestic magazine titles per inhabitant (Hemels, 1998, p. 145). The figure of 8,000 titles mentioned by Bakker and Scholten (1997) includes a large number of very different types of magazines ranging from TV guides to professional publications, newsletters, membership publications, brochures, and so on.

This case study investigates one part of the magazine market in more detail, the market for consumer magazines. The study is structured as follows. **Chapter 2** defines the notion of a consumer magazine. We then discuss how consumer magazines relate to the characteristics of information goods derived in the General Framework. In the literature on the economics of newspaper publishing, two points have been highlighted.

First, publishing involves high fixed costs, and, second, advertising is important to subsidize content and thus the price charged from the readership. The first point implies that total average cost declines in circulation, that is, the number of copies sold. The second point suggests that revenues from selling advertising space in a newspaper can be used to cover fixed costs.

As some empirical studies using US data on daily newspapers from the 1960s found highly concentrated market structures but competitively low prices, it has been argued that due to the presence of large scale economies more suppliers may not enhance market performance and - implicitly - consumer welfare. (1)

Another argument against an increase in the number of suppliers refers to "quality" and "diversity" of content. (2) It is feared that increasing competition gives rise to a proliferation of products with inferior quality which satisfy mainstream demands only to earn revenues to cover costs. With competition, it is claimed, diversity may vanish and minority demands may be ignored. Not much empirical research has been concerned with the market for consumer magazines so far. (3)

In **Chapter 3**, a theoretical model is used to make the link between circulation, advertising, pricing, and competition explicit.

Chapter 4 describes the Dutch market for consumer magazines. After presenting the data set and data sources we identify market segments, magazines, and key players. We also investigate profitability and strategies of magazine publishers. Finally, we explore the development of prices and circulation in three sub-markets, opinion magazines, gossip magazines, and men's magazines, which can be characterized as oligopolies.

In **Chapter 5**, we apply regression analytic techniques to investigate the link between cover price, ad-rate, circulation, and readership characteristics for a sub-sample of 71 magazines for which also information on readership characteristics is available. The study closes with a summary and implications for public policy **(Chapter 6).**

2 Consumer magazines as information goods

The Dutch Association of Publishers NUV (*Het Nederlands Uitgeversverbond*) [(4)] categorizes magazines into four general groups: (1) general-interest magazines, (2) opinion magazines, (3) TV and radio guides, and (4) professional and scientific magazines. We will refer to the groups 1 to 3 collectively as **consumer magazines** to distinguish them from group 4, **professional magazines**.

Consumer magazines, in general, cater to a non-professional audience and are determined for sale on the free market nation-wide. By contrast, professional magazines target a specific profession, trade (including free professions, services, institutions, government), or field of science. For some magazines (such as *Intermediair*, a weekly featuring job ads) the distinction between the two groups is problematic. The 1998 list of magazines published by NUV members contains 553 titles, of which only about 170 can be defined as consumer magazines. In the remainder of this chapter, we focus on the markets for consumer magazines, opinion magazines, and TV guides. Definitions of these sub-types of consumer magazines are given by NUV.

Consumer magazines are defined as "each magazine that in first instance is targeted at a (very) general readership of women, men, youths, children, or families. The content is informative and/or entertaining. The magazine must be commercially exploited by sale on the free market for readers and/or advertising space. Consumer magazines include magazines for women (the so-called glossies), the family, and the youth as well as special-interest magazines." [(5)]

Opinion magazines are defined as "each magazine that appears on a weekly basis and is commercially exploited by sale on the free market for readers and advertising space. The content is a package of topical, opinionating informative articles covering a wide range of societal aspects. Given the ample editorial attention paid to national politics, opinion magazines have an influential position, partly because the readership consists of opinion leaders. The opinion magazines discuss the news of last week, show how various developments relate, clarify backgrounds, and determine their stand in the current events. An important part of an opinion magazine's editorial content is based on own research and interviews with experts/insiders in particular fields that are often in the news."

Finally, **TV-guides** are described as "each magazine that appears weekly and is published by or through a broadcasting organization. TV-guides provide weekly information on TV and radio programs nationally and internationally as well as extensive and illustrated discussions of these programs and information about anything that happens around screen and microphone."

Consumer magazines exhibit some of the characteristics of information goods described in the General Framework. Magazines are the prototype of an **experience good**. The value of the good is only discovered after it is consumed. This means that there is an incentive for publishers to invest in brand loyalty. Many magazines try to achieve this by giving discounts to subscribers and offering complementary products. An example is the football magazine *Voetbal International*, which offers football gear at a price that decreases in the time length of subscribing to the magazine. Other magazines offer discounts on travel arrangements or books.

Consumer magazines are **non-rival goods**. After having been read by one consumer it can be read by another consumer without additional costs. This non-rival character is recognized in the Netherlands by the popularity of the so-called "leesportefeuille". This portfolio is a collection of magazines distributed immediately after the issues are published and redistributed week after week until the final household becomes the owner of the *leesportefeuille*. The price of a subscription to the *leesportefeuille* decreases with the time elapsed after the issues' publication dates. In some cases, magazines depend for more than 40% of their circulation on this distribution channel, typically if the content has no "news" component (e.g. comics).

Producing the original, particularly when setting up a new magazine, may involve **high fixed costs** resulting from investing in and maintaining cost-intensive printing facilities, editorial staff, distribution channels etc. "First-copy" costs can therefore be expected to be high but may decrease rapidly as circulation increases. By contrast, the **marginal cost** of production, that is the costs of producing copies from the original, and the marginal cost of distributing the magazine to downstream suppliers or readers may be very **low** compared to the fixed costs of creating the original.

For German publishers, Heinrich (1994) reports a share of fixed costs in total revenues of 38% for magazine publishing and of 53% for newspapers. Labor costs accounted for 60% of fixed costs of magazine publishing, or 22.8% of total revenues, and for 75% of fixed costs of newspaper publishing. Costs that varied with circulation amounted to 46% of total revenues for magazines and 34% for newspapers.

No detailed information on the cost structures of Dutch consumer magazines is publicly available. However it is possible to present some descriptive statistics for the magazine publishing industry as a whole and compare it to newspaper publishers and the average manufacturing firm. The data stem from the Dutch Central Statistical Office (CBS, The Hague) and are aggregated from confidential firm-level information over the time period 1978-1992. For that reason, it is not possible to distinguish between publishing of consumer and professional magazines or to report publisher-specific descriptive statistics. Table 3.1 contains descriptive statistics for the share of wages and expenses for materials in total revenues.

Magazine publishers had a substantially lower wage share but a higher share of expenses for input factors (materials etc.) than both newspaper publishers and the average industrial firm. Interestingly, the wage share of 22.2% very closely corresponds to the average wage share of German magazine publishers reported by Heinrich (1994). To supplement the descriptive statistics Graph 3.1 depicts the time development of median share of wages and materials for magazine publishers, newspaper publishers, and the manufacturing sector. All groups reduced the share of expenses for input factors in the late 1980s and early 1990s. The wage share of magazine publishers increased over the period, whereas both newspaper publishers and the average manufacturing firm reduced the wage bill.

In sum, the **"high fixed, low marginal cost structure"** characteristic of information goods such as computer software is less pronounced in the market for consumer magazines. Although publishers certainly have to incur fixed costs to launch a magazine (including format, styling, advertising, and so on), these fixed costs do not seem to be dramatically different from the average manufacturing firm. Further, marginal cost, even if not directly observable, will not converge to zero with increasing the number of copies because costs of materials (paper, ink, etc.), editorial work, and distribution have to be incurred.

Another feature of information goods is the possibility to subsidize or sponsor content by **advertising**. Advertising is an important source of revenue for most publishers. Only scarce information however is available on Dutch publishers' share of advertising revenues in total revenues. For 1998, the publishing group De Telegraaf reported 51% of total revenues to be obtained from advertising in its newspapers and magazines.

Heinrich (1994) found that, in 1990, German publishers of daily newspapers made on average 64.8% of total revenue from selling advertising space, for opinion magazines the share was 62.8%, and for general interest titles 42.1%. In many cases, publishers collect advertising fees through subsidiaries. These subsidiaries often offer "package deals" that include discounts when advertisers choose to place ads in more than one of the publisher's magazines.

Mixing content and advertisements is a general strategy of publishers in the market for consumer magazines. The optimal mix of editorials vs. advertising as well as newsstand vs. subscription prices may be determined by the publisher through thorough pre-launch market research. After the introduction of a new magazine, publishers can adapt advertising rates when it turns out that circulation increases as hoped.

In general, the advertising market is more volatile than the readership market. In the market for advertising expenditures, magazine publishers compete with other media such as newspapers, radio, television, and billboards. Over the period 1989-1998, the share of press media (i.e. newspapers, door-to-door magazines, consumer magazines, and professional magazines in) in total advertising expenditures in the Netherlands has decreased from 67% in 1989 to 58% in 1998 (BBC/VEA, 1999). The share of consumer magazines within this category has slightly gone up from 12% in 1989 to 14% in 1998. Over the whole range however, advertising expenditures allocated to consumer magazines have been decreasing, while expenditures spent on ads on TV or in address books have been on the rise. Magazine publishers have thus been trying to reduce the dependency on advertising revenues.

Network effects and **hardware dependency** may not be quite obvious to exist. However, in the case of launching a new magazine, publishers use a variety of strategies similar to those in markets with network effects. These strategies include giving away free copies, free subscriptions, or revealing parts of the content to build up a readership base which, in turn, is attractive for advertisers. Examples of the free subscription strategies are *Intermediair*, a job-ads magazine, or *Computable*, which focuses on ICT topics.

Offering favorable advertising rates to advertisers that "take the gamble" to advertise in a newly launched magazine is a similar strategy to give the new magazine momentum. Further, some experiments with the electronic delivery of magazines are also being undertaken. Therefore, the hardware feature may become much more important in the future.

The market for consumer magazines has not experienced **standard wars**, since the market is inherently prone to product differentiation. Magazine publishers try to create brand loyalty of readers and advertisers by offering complementary products and services (even on-line now). In a number of cases, publishers launched magazines and used group pricing for membership organizations.

In the case of ANWB Media, a publisher owned by the Dutch Touristic Association, the publication *Kampioen* is distributed free-of-charge to all members (and is not available for non-members) while other magazines offered by ANWB Media are sold with a discount to members. Another example includes De Telegraaf that publishes *Voetbal (Magazine)* for the Royal Dutch Footbal Association KNVB.

3 The Economics of Magazine Publishing

A newspaper or magazine satisfies the demands of two customer groups simultaneously. News or entertainment is sold to readers and advertising space to advertisers. It is conventional wisdom that the newsstand and subscription prices of newspapers and magazines are "subsidized" by the revenues earned through selling advertising space (see Lacy and Simon, 1993; Belch and Belch, 1995). In empirical studies on the magazine markets in the US and Germany it has been found that advertising revenues account for about 50% of publishers' total revenues (see Heinrich, 1994; Kalita and Ducoffe, 1995; Weigand and Lehmann, 1999).

As argued by Corden (1953) in a theoretical study on the economics of newspaper publishing, the price charged for advertising space will depend on the circulation of the magazine, that is, the amount of copies sold to the readership per issue of the magazine. Having a second source of income, namely revenues from selling ad-space could affect the publisher's pricing behavior in both markets.

To make the link in pricing between the two markets explicit, we will use a simple model of a monopoly publisher. [6] To understand pricing behavior on the markets for ads and readers, the monopoly model provides us with sufficient intuition and reduces notational effort. From the monopoly model it is fairly straightforward to interpret the effects of allowing for more competition. However, the complexity of combining ads, circulation and cover prices prevents writing out a full oligopoly model.

Standard price theory tells us that a monopolist, facing a downward sloping demand curve for the commodity he offers, maximizes profits when he chooses price or quantity such that marginal revenue equals marginal cost. This first-order condition of profit maximization can be handily depicted by equation (1)

$$(1) \qquad \frac{p-c}{p} = \frac{1}{\varepsilon}$$

in which p denotes price, c marginal cost of production, and ε the price elasticity of demand. According to (1), the monopoly power of a firm, defined as the relative mark-up of price over marginal cost ("Lerner index"), is only restricted by the ability of consumers to switch to substituting products or to do without the product offered by the monopolist. If the monopolist offers two products that are *unrelated* in demand or cost he will price each of the commodities separately according to (1).

How will the monopolist set prices if the two commodities have dependent demands? As shown in Tirole (1988, p. 70), the monopolist maximizes total profit in the case of substitutes if he sets higher prices for both products than in the single-product case or in the case of independent demands. The insight is that by offering a substituting product himself - and thus pre-empting entry of potential newcomers offering a substitute - the monopolist can increase his market power. If the two goods are complements it is profit maximizing to charge a lower (higher) price for the product with the higher (lower) price elasticity of demand. A multi-product firm thus can take advantage of dependent demands and market power differentials to either raise or "subsidize" prices.

However, the cases studied in Tirole do not describe the publisher's profit maximization problem. News or entertainment and ad-space are neither substitutes nor complements from the readership's or the advertiser's perspective. To model the pricing behavior of a publisher the special feature that circulation is important for advertising demand has to be taken into account. For simplicity, we assume that the monopoly publisher produces a single magazine under perfect information and certainty regarding costs and demands. Readers are perfectly informed about the quality of content, which is given. (7) We will use the following notation:

p	cover (newsstand) price of the magazine
r	ad-rate, i.e. price for full-page ads
q	circulation of the magazine
n	number of pages per issue allotted to editorials
a	number of pages per issue allotted to ads
k	$n / (n + a)$
C	total costs
π	profit

We assume that the space dedicated to editorials (news, entertainment) and ads can be measured in full pages so that $n + a$ yields the total number of pages per issue of the magazine. The publisher maximizes the profit function given by (2)

$$(2) \qquad \max_{q,a,n} \quad \pi = p(q,k)q + r(a,q)a - C(q,a,n)$$

through choosing circulation as well as editorial and ad space. The cover price is assumed to be a function of circulation and the share of editorial pages in total pages. Since the monopolist faces a downward-sloping demand curve, a higher circulation can only be sold to the readership at a lower cover price, implying the standard inverse price-quantity relation.

Readers are assumed to be willing to pay more for a magazine if the editorial share increases so that p and k are positively related. The ad-rate depends inversely on ad-space. As argued above, circulation is important for advertisers. One would suspect that advertisers demand more ad-space or are willing to pay a higher ad-rate per ad-page if circulation is higher, because they can reach a bigger audience.

However, a positive relationship is not necessarily the only plausible possibility. Advertisers usually target readership groups with specific characteristics (income, age etc.). With increasing circulation the readership demographics may change such that the impact of ads on targeted groups may be diluted. Under these conditions, ad-rate and circulation could be inversely related.

Total cost, C, is a positive function of circulation, ads, and editorials. We further assume marginal costs of circulation, ads, and editorials to be positive and, for simplicity, constant. The partial derivatives of the cost function are given by

$$c_q = \frac{\partial C}{\partial q} \qquad \text{marginal cost of circulation,}$$

$$c_a = \frac{\partial C}{\partial a} \qquad \text{marginal cost of creating an ad-page,}$$

$$c_n = \frac{\partial C}{\partial n} \qquad \text{marginal cost of creating a news-page.}$$

The model is solved by letting the monopolist simultaneously choose *q*, *a*, and *n* such that his profits are maximized. Using the following definitions

$$\varepsilon_p := -\frac{p}{q}\frac{dq}{dp} > 0$$ price elasticity of readership demand,

$$\varepsilon_r := -\frac{r}{a}\frac{da}{dr} > 0$$ price elasticity of advertising demand,

$$\alpha := \frac{q}{r}\frac{\partial r}{\partial q} \underset{(\leq)}{>} 0$$ "circulation" elasticity of ad-rate,

the first-order conditions of maximizing (2) through choice of *q*, *a*, and *n* can be written (after rearranging to make them easier to interpret) as

(3) $$\frac{p - c_q}{p} = \frac{1}{\varepsilon_p} - \frac{ra}{pq}\alpha$$

and

(4) $$\frac{r - (c_a + kc_n)}{r} = \frac{1}{\varepsilon_r}.$$

Equation (3) describes pricing in the readership market. The relative mark-up of cover price over marginal cost of circulation is inversely related to the readership's demand elasticity as in the standard monopoly case (1). At a given demand elasticity ε_p, the mark-up now also depends on the ratio of revenues from selling advertising space to revenues from selling the circulation as well as on the circulation elasticity. This means, if circulation positively affects the demand for advertising, the publisher will set a lower cover price to increase circulation, thus attracting more advertising demand which raises revenue from selling ad-space. The cover price will be the lower the more revenue can be made from advertising relative to revenue from circulation.

If revenue from advertising is relatively high compared to revenue from circulation, or alternatively, the circulation elasticity of ad-demand is positive and large, the monopolist will set the cover price below marginal cost of circulation. Therefore, as conventional wisdom holds, readers benefit from the presence of ads in a magazine by being charged a lower price than they would have to pay for an ad-free magazine. If there is no impact of circulation on ad demand ($\alpha = 0$) equation (3) reduces to the standard monopoly case as given by (1). If advertisers do not like high circulation but prefer niches, the publisher simply sets a higher cover price to reduce readership demand.

Equation (4) describes pricing in the advertising market. Here the publisher will set a higher price than in the standard monopoly case. Advertisers thus pay for the (marginal) costs of producing editorial content. The impact of competition in the advertising market on both ad-price and cover price can be easily concluded from (4).

Competition in the form of new publishers entering the market and offering close substitutes to the established magazine means that advertisers have possibilities to advertise in competing magazines. With competition the price elasticity of advertisers' demand will increase, reducing the publisher's pricing power in the advertising market and squeezing her revenues. The established publisher must then charge a higher cover price, given that the price elasticity of readership demand remains unchanged. Raising cover price will be the harder for a single publisher the more magazines compete for the same readership, that is, the more magazines are close substitutes from the readers' perspective.

Equation (4) also depicts the impact of the editorials-to-ads ratio on cover price. Extending editorials at the expense of ad-pages, that is, raising k, gives rise to higher marginal costs, all else equal, reducing monopoly profits in the advertising market.

For an ad-free magazine, $a = 0$, and (3) reduces to (1), while (4) is not relevant in this case. The publisher sets the monopoly price in the readership market. For sponsored magazines, very low values of n or k may be observed. In the extreme case, $n = 0$ implies that (4) reduces to the standard monopoly case, (1), while (3) is not relevant.

The above results for the advertising market change somewhat if one assumes that readers value the total number of pages rather than the proportion of editorials to ads. In the profit function circulation then depends on $n + a$ instead of $k = n / (n + a)$. Equation (4) is altered as shown in (4a)

(4a) $$\frac{r-(c_a-c_n)}{r}=\frac{1}{\varepsilon_r}.$$

Marginal costs of producing ads and editorials are not added up as in (4) but subtracted. Equation (4a) thus implies that the publisher will set an ad-rate that is lower than the monopoly ad-rate if readers value the number of pages of a magazine, and thus value advertising as information or entertainment, rather than the proportion of editorials to ads. As before, however, competition in one or both markets has a price-lowering effect.

This simple model has shown how magazine and ad pricing are connected. Further, it adds the insight that this link depends on

(1) how readers value total magazine space and editorials vs. ads, and

(2) how advertisers react to changes in circulation.

Because markets are connected, pricing behavior of publishers may deviate from the standard one-product-one-market textbook cases. Particularly, below-marginal cost pricing may show up in the readership market as a natural outcome of pricing in connected markets rather than that it is evidence for predatory pricing.

4 The Dutch market for consumer magazines

This chapter describes the Dutch market for consumer magazines during the period 1987 to 1998. The market for consumer magazines can be considered a saturated market. Although the average income of the Dutch population has risen, the average time spent reading magazines has decreased. In the period 1975-1995, the average time spent on reading magazines has decreased by 30%, compared to 20% for newspapers and 25% for books. The main reason for this reduction is a drop in the number of readers, not a general decline of average reading time. Explanations for this drop include the wider supply of television programs, an increase in the number of people that have day duties and therefore have no time or energy left at night to read, as well as the increasing competition from other leisure activities (SCP, 1998, p. 707).

Over the last two decades, publishers have gradually switched from publishing general-audience titles towards special-interest magazines due to demand saturation. Only a very limited number of today magazines reach a circulation exceeding 500,000 copies. The main growth of circulation in the market results from the publication of (new) special interest magazines. (8) The main characteristic of the market is thus a high degree of product differentiation, or in other words, market segmentation.

4.1 Data and variables

Circulation-related information (paid circulation, subscriptions, newsstand copies etc.) is available from NUV's annual reports. (9) Information on newsstand prices (*cover price*), prices for a standard one-year subscription, and prices for standardized forms of advertising (full-page black-and-white, full-page color ads, *advertising rate*) can be obtained from so-called "tariefkaarten" (Nederlandse Standaard Tarief Documentatie, NSTD). (10) These price lists have a (nearly) standardized format ("card"), contain magazine information relevant to advertisers (prices for different ad-formats, publication frequency, print-related information, minimum circulation, target groups etc.), and are sent to media agencies (who place ads for clients) by the publishers. (11)

The demographic and socio-economic profile of a magazine's readership can be found in the SUMMO Scanner (12), which investigates in bi-annual panel surveys the reading habits of Dutch consumers. For 1998, the SUMMO Scanner includes about 100 established consumer magazines, providing magazine-specific information on the share in the readership (total, by gender, main provider of household income ["kostwinner"], main shopper ["doet boodschap"]), regional distribution of readers (top cities, North, West, South, and East) as well as the age and income structure of readership.

Unfortunately, none of the sources collects magazine-specific information on the number of pages allotted to editorial and advertising. Issues of NUV-reports and the SUMMO Scanner were available to us from 1987 on, "tariefkaarten" from 1991 on. Based on the annual reports of NUV (*Het Nederlands Uitgeversverbond*) and own research we were able to identify 214 Dutch consumer magazines during the time period 1987 to 1998. However, only for 71 of these magazines complete information on circulation, prices, and readership characteristics could be collected for at least two consecutive years during the period 1991 to 1998. This panel data set will be used in the regression analysis to be presented in Chapter 5. Of the identified 214 magazines, 62 have been launched since 1997. Publisher-related information (sales revenues etc.) were obtained from the companies' annual reports. Table 4.1 summarizes variables and data.

4.2 Market segments, magazines, and publishers

From casual observation and the classification for printed media used in the SUMMO Scanner, market segmentation, or horizontal product differentiation, is a pronounced feature of the market for consumer magazines. We have refined the SUMMO to define product groups that are as homogenous as possible concerning target groups and content. We identified 29 different market segments plus two groups collecting miscellaneous magazines.

Table 4.2 contains a description of these categories and the magazines classed as belonging to each category. Magazines listed in the column "Titles included" belong to the set of 71 magazines for which all relevant information could be gathered. The column "Identified titles, not included (publisher)" contains all other consumer magazines we have come across in our search but for which crucial information either on circulation, cover prices or readership characteristics could not be obtained.

Two categories do not define a "homogenous" sub-market in which titles can be seen as close substitutes. The first category refers to the magazines published by the Dutch Touristic Association. It is unclear with which consumer magazines the ANWB titles compete. The ANWB titles are basically membership magazines with newsstand sales of less than 10% of paid circulation. The second category has been named "miscellaneous". Magazines in this category cater to very different "niche demands" and cannot be defined as close substitutes that approximately cater to the same readership.

Table 4.3 lists all magazines with complete data included in our panel data set. Further, except for "Avenue" which ceased to exist in 1994, it gives 1998 information on the publisher, number of the magazine's issues per year ("Freq.), market segment identification ("Seg.") as defined in Table 4.2, paid circulation (= newsstand copies + subscription copies), newsstand price ("cover price"), price for a full-page black-and-white ad (single issue-placement, "ad-rate"), and the magazine's share in the total readership as captured by the SUMMO Scanner. Circulation, newsstand and subscriber shares as well prices clearly vary across market segments. Glossy and gossip magazines as well as the comic Donald Duck have the highest share in total readership.

4.3 The Key Players

The Dutch market for consumer magazines is characterized by a small number of large players and a large number of very small players. Table 4.4 lists the leading publishers represented in the sample, the number of magazine titles included and excluded, and the number of market segments served. Eight independent publishers produced 60 (141) of the 71 (214) magazines.

VNU is by far the largest player in the market for consumer magazines, serving 17 of the market segments defined in Table 4.2 with at least one publication. It publishes amongst others women's weeklies such as *Libelle* and *Margriet*, women's monthlies such as *Beau Monde* and *Cosmopolitan*, comics such as *Donald Duck* and *Disneyland*, and special-interest magazines such as *VT-Wonen* and *Mijn Tuin*. VNU is also active in the market for TV-guides through a 25% equity interest (acquired in 1991) in the AKN-combination that publishes the TV-Guides of AVRO (Avrobode/Televizier, Televizier), KRO (Mikro-Gids, TV Studio) and NCRV (NCRV-gids). The remaining equity is owned equally by the three public broadcasting corporations. After holding shares in the Holland Media Group (HMG) and Vlaamse Televisie Maatschappij for several years in the 1990s, VNU sold its interest in the two commercial broadcasting organizations in 1998.

Besides its activities on the national market for consumer magazines and TV-Guides, VNU has expanded internationally. In 1998, 52% of total revenue (5,438 million guilders) was earned abroad. Consumer magazines is still the most important source of revenues with a 27% share, followed by business information USA (25%), newspapers (16%), telephone directories and information services (16%, including scoot.com), business information Europe (14 %), and educational publishing (2%) (cf. VNU, Annual Report 1998). Operating profit was 1,256 million guilders, or 23.1% of total revenues. Employment at VNU was 6,041 in the Netherlands and 7,269 abroad.

Audax publishes a number of consumer magazines including *Weekend*, *Aktueel*, *AvantGarde*, *Vriendin*, *Mijn Geheim*, *Top-10 Popmagazine* on the Dutch market and *EOS*, *Zondagsblad* and *TV Gids* on the Belgium market (through its subsidiary Uitgeverij Cascade). In 1996, Audax formed a joint venture with the public broadcasting corporation TROS to publish the TV Guides *TROS Kompas* and *TV-Krant*, previously published by TROS in co-operation with De Telegraaf. At the end of 1997, the joint venture started publishing *TV Sport Magazine*, an unsuccessful publication that was taken from the market after a few editions.

Audax is also active on the market for opinion magazines through the publication of *HP/De Tijd*, acquired in 1994 from publisher HPU (52%), VNU (28%), and the bank MeesPierson (20%). In 1998, net revenues of the Audax holding totalled 465.0 million guilders. Audax and its subsidiaries employed 1,063 permanent staff. Net profits for 1998 amounted to 14.9 million guilders, or 3.2% of net revenues.

Through a network of subsidiaries (e.g. Van Ditmar, Van Gelderen) Audax has gained a very strong position in distributing Dutch and foreign-language newspapers and consumer magazines to sales outlets. [(13)] The build-up of a dominant market position in a downstream market of the publishers' industry has already raised the attention of the Dutch competition authority NMa. In 1998, NMa started investigating a complaint against Audax put forward by Edipress, one of their competitors on the Dutch market for the import and distribution of foreign magazines and newspapers. Edipress' complaint stated that the company could not directly supply its magazines and newspapers to the AKO retail outlets (a subsidiary of Audax) but was forced to use two other Audax subsidiaries (van Gelderen and Betapress) to access this distribution channel (NMa, 1998). The NMa felt that the complaint was serious enough, pending a final decision, to impose damages in the case Audax would not comply with its ruling to allow Edipress access to the AKO stores on reasonable terms. The imposement of damages in the case on non-compliance was lifted in december 1999 because Edipress had left the market and there was no non-compliance with the NMa ruling.

De Telegraaf Group, traditionally a newspaper publisher, publishes a small number of consumer magazines. Most well-known among them is the gossip magazine *Privé*. In 1996, De Telegraaf acquired six magazines from Reed-Elsevier. De Telegraaf also publishes a number of sports magazines such as *Voetbal (Magazine)* and *Voetbal Totaal*. De Telegraaf was forced to withdraw from the market for TV-guides after TROS decided to go into business with Audax for the publication of *TROS Kompas* and *TV-Krant*.

Total revenue in 1998 was 1,520 million guilders, of which 65.2% came from newspaper operations, 9.8% from door-to-door newspapers, 6.7% from magazines, 14.2% from printing for third parties, and 4.1% from other activities such as equity interests in regional and national television (including participation in the commercial channel SBS6). Of the total revenue, 97.3% was earned in the Netherlands. Total employment at the De Telegraaf group was 5,109.

ANWB Media is the publisher of the Royal Dutch Tourist Association ANWB. In 1998, ANWB had a total membership of 3.46 million people.[(14)] Members of the ANWB receive the 11 issues of its main publication, *Kampioen*, for free. As such, with 3.46 million copies the *Kampioen* has the highest circulation of all Dutch magazines (the magazine is not sold on the free market). Other ANWB publications include *Autokampioen*, *Kampeer- en Caravankampioen*, *Op Pad*, *Reizen*, and *Waterkampioen*. ANWB members enjoy a discount on the subscription price of these magazines. Subscriptions and single issues are also available to non-members at a higher price. Besides the publication of magazines, ANWB also publishes cd-roms and a number of annual publications such as the *ANWB Handboek*.

In 1998, net revenues of ANWB totalled 927.6 million guilders of which 121.2 million (13.1 %) come from membership fees, 60.3 million (6.5 %) from paid publications and 37.7 million (4.1 %) from other revenues including advertising income from the *Kampioen*. Almost all revenues were earned in the Netherlands. Employment at ANWB totalled 3,219 full-time equivalents (including temporary staff).

Weekbladpers publishes books (through various subsidiaries including Arbiederspers, Em. Queriod) and magazines such as *Opzij*, *Psychologie Magazine*, *Sport International*, and *Voetbal International*. It is also active on the market for opinion magazines through the publication of *Vrij Nederland*. During the 1990s, Weekbladpers sold part of its professional magazines and educational activities. In 1996, it disinvested its subsidiary Nijgh & Van Ditmar Periodieken through a management buy-out and sold Nijgh & Van Ditmar Educatief to printer/publisher Bosch & Keuning.

Reed-Elsevier was formed on January 1, 1993 through a merger between the Dutch Elsevier Group and the UK publishing company Reed. In recent years, Reed-Elsevier has focused on the market for scientific (Elsevier Science, Medical publishing and communications), professional (LEXIS-NEXIS, Reed-Elsevier Legal Division, Reed Educational & Professional Publishing), and business (Cahners Business Information, Reed Business Information, Elsevier Business Information, Reed Exhibition Companies) publishing.

The company has also been investing heavily in electronic publishing products such as searchable on-line databases and web browsers. In 1998, net revenues totalled 3.191 billion pound (around 10 billion guilders), of which 19.5% came from scientific publishing, 36.2% from professional publishing, and the remaining 43.5% from business publishing. Operating income was 25.5% of net revenue. Total employment at Reed-Elsevier was 25,900.

Reed-Elsevier publishes a number of consumer magazines through its subsidiary Elsevier Business Information such as *FEM/De Week*, *Money, Account*, *Beleggers Belangen*, and *VB Magazine*. At the end of 1995, the newly formed company sold six major magazines (*Oor*, *Hitkrant*, *Residence*, *Man*, *Elegance* and *Autovisie*) owned by its subsidiary Bonaventura to the De Telegraaf group. Thus Reed-Elsevier narrowed down its scope to consumer magazines that may yield synergies with its many publications for the professional and scientific market. Reed-Elsevier is also active in the market for opinion magazines through the publication of *Elsevier*.

Wegener-Arcade was founded through a merger between the newspaper and magazine publisher Wegener Tijl and the music publisher Arcade as of January 1, 1996. Wegener Arcade has published consumer magazines such as *Party*, a number of music magazines, and golf magazines such as *Golfers Magazine*, *Golf Journaal* and *Golf Nieuws*. As in the case of Reed-Elsevier, Wegener Arcade wants to diversify away from the traditional magazines and towards becoming a publisher for professional and trade audiences (Wegener Arcade, Annual Report 1998).

Traditional Wegener magazines such as *Automobiel Klassiek* or *Radio Control* and the already mentioned music magazines were therefore sold in 1998. Wegener has a strong position on the market for (regional) newspapers in the Netherlands. In 1994, the company strengthened its position through the take-over of Sijthoff Pers which owned a large number of Dutch regional newspapers. Besides subscription newspapers, the company also publishes free door-to-door newspapers. Other activities include music publishing (through Arcade Music Group), film and video (sales of Jerry Springer videos), radio (Radio 10 Gold, Jazzradio FM, Love Radio), television (TMF), direct marketing, cartography and municipal information guides, digital publishing, graphic operations and information and communication technology.

Revenue in 1998 totalled 1,544 million guilders, 32% of which was earned through advertisements in daily and weekly newspapers and free door-to-door newspapers, 15% through subscriptions and single-copy sales of daily and weekly newspapers, 25% through recordings, video, and film, radio and television, 8% through magazines, municipal information guides, electronic products, cartographic products, 9% through direct marketing services, and 11% through graphic products and others. Operating profit was 127 million guilders or 8.2 % of total revenues. Total employment at Wegener Arcade was 5,500. [(15)]

Quote Media Magazines publishes consumer magazines such as *Elle*, *Elle Wonen*, *Quote*, and *Santé*. The initial publication of the current holding was *Quote*, a Fortune-like magazine. Through its subsidiary Hachette/VDB Magazines (a joint venture with the major French publisher Hachette) the company started publishing the women's magazines *Elle* and *Top Model* as well as the health magazine *Santé* in the middle of the 1990s. In 1997, Quote took over the art magazine *Art & Value*, re-styled it, and published it as *Villa d'Arte* from 1998 on. Besides magazine publishing, Quote also held a 50% equity interest in *Veronica Nieuwsradio*, which proved to be an unsuccessful investment in the spring of 1996.

4.4 Profitability, entry, and strategic behavior

Economic reasoning implies that entry will occur whenever positive economic profits can be expected. Except for the scarce figures cited for some of the largest publishers in Section 4.3, publishers are rather silent on the returns on invested capital to be earned in the market for consumer magazines. Table 4.5 therefore can only provide descriptive statistics at the industry-level regarding profitability, as measured by industry gross profits (sales revenues minus expenses for personnel and materials) divided by industry sales revenues, firm size, measured by the number of employees, and the number of firms that reported to the CBS in each year of the observation period 1978 to 1992. This industry data is aggregated from confidential firm-level information collected by the CBS.

Table 4.5 reveals that the average and median profitability of magazine publishers was clearly higher than the respective profits of both newspaper publishers and the average manufacturing firm. Newspaper publishers were slightly less profitable than the average manufacturing firm. Graph 4.1 nicely shows that median profitability of magazine publishers was substantially higher than the median profitability of the average manufacturing firm during the whole observation period and also higher than the median profitability of newspaper publishers after 1981.

Median profitability of magazine publishers has a positive trend over the whole period. Profitability deteriorated between 1983 and 1987 but significantly improved thereafter. By contrast, newspaper publishers experienced a significant drop in profitability between 1978 and 1982, and recovered thereafter, without reaching the profitability of the late 1970s again. The average manufacturing firm has steadily improved profitability since the early 1980s.

A large number of new magazines is introduced on the Dutch market every year. Table 4.6 lists new launches and exits of magazines, as reported to the NUV, between January 1997 and January 2000. In many cases, the new magazines have been launched by the leading publishers as identified in Table 4.4 or other well-established publishers such as Veronica, Keesing, or PCM Uitgevers rather than by independent new ones. Entry by new or small independent publishers has occurred only in growing market segments such as "lifestyle" (e.g. Harlon Publishing) or in specific niches such as "sports special interests". Given the profitability depicted above, established publishers apparently have sufficient market power to keep costs of entry for potential entrants high. What constitutes barriers to entry in the Dutch market for consumer magazines?

Bain (1956) identified four elements of market structure that affect the ability of established firms to prevent supra-normal profits (rents) from being eroded by entry: economies of scale (e.g. the presence of fixed costs), absolute cost advantages (differences in marginal costs), product-differentiation advantages, and capital requirement (see Tirole, 1988, pp. 305 for a discussion).

It is difficult to assess whether magazine publishers enjoy economies of scale in the traditional sense. Although publishers incur fixed costs when launching a new magazine, a high fraction of the costs incurred for each issue is marginal (see the discussion above). The scale economies argument has been readily advanced in the literature to justify horizontal concentration and mergers or acquisitions in the publishing industry. Given the ICT revolution the scale argument has lost its persuasiveness at least with respect to production. Desktop computer publishing techniques, outsourcing of printing facilities and, most recently, information gathering and exchange via the Internet favor both the existence of small publishers and the entry of new publishers.

Absolute cost advantages of incumbent publishers in the magazine market may result from a variety of sources. First, magazine publishers established in a specific market, say women's weeklies, have superior information about this market compared to potential entrants. This experience obtained through learning-by-doing is also relevant for launching a new magazine in the same differentiated market. Second, cost advantages may be the outcome of well-established distribution channels to retail outlets. (A first look at the distribution of Dutch consumer magazines reveals that the three main distribution companies on the market are subsidiaries of Audax (Betapress), De Telegraaf and VNU (Aldipress)). Third, incumbent magazine publishers may enjoy cost advantages through established contacts with suppliers of input factors, printing companies (if not owned by the publisher) and advertisers.

Incumbents may also have first-mover advantages due to product differentiation. By cornering a certain niche market and building up brand loyalty it is difficult for potential entrants to enter the same market segment. The effect is strengthened by an incumbent's strategy of multi-title publishing.

Finally, launching a new magazine may require "deep pockets", that is, at any time sufficient funds, either generated internally or acquired externally, have to be available to finance the venture without putting other activities at risk. Incumbent firms usually have not only a higher volume of internally generated funds but also better access to external capital (bank loans etc.).(16) Therefore, it is not surprising that most new magazines in the Netherlands have been launched by incumbent publishers.

Industrial organization theory discusses several strategies, such as predatory and limit pricing or excess capacity, by which incumbents may be able to deter entry.(17) In the case of predatory pricing, the incumbent sets its price below the rival's average cost to drive him from the market. In the case of limit pricing, the incumbent sets price at such a level that it is not attractive for potential rivals to enter the market.

Looking at the anecdotal evidence, none of these two pricing-strategies seems to have been used by Dutch publishers of consumer magazines. However, strategies resembling incumbents' behavior discussed in the literature on the economics of innovation have been used by publishers. As shown in this literature, it can pay off for the incumbent to wait with the introduction of an innovation and "milk" his cash-generating established product, until entry is an immediate threat. The incumbent has to be prepared to counter innovative entry immediately as it takes place, that is, he himself has to have the innovation "on shelve". If entry indeed occurs, he puts his new product on the market to take away demand from the entrant.

The strategy, sometimes referred to as "shelving", is in its effect similar to predatory pricing. It may also be used in the market for consumer magazines. New magazines are often targeted at creating a new market segment. The launch can therefore be seen as an attempt at product differentiation. For an incumbent firm, launching a new magazine is not very attractive because in the face of stagnant advertising budgets and consumer demand for magazines (which is the relevant situation for the Dutch market) it merely dilutes its circulation and advertising revenues. However, if a new firm enters the market with a "new format" magazine, it is rational for the established publisher to bring a similar magazine to the market and drive the rival out of the market.

In contrast to the "undercutting price" argument of predatory pricing, "predatory product imitation" need not be based on charging a price that is lower than, in the extreme, the entrants marginal cost. It is sufficient to launch the imitating and thus substituting product, charge the same price, and steal away demand from the new entrant to make entry unprofitable. In addition, there is also a long-run effect. The publisher can build a reputation for retaliating whenever an entrant attempts to establish a new magazine. The (credible) threat of retaliation may discourage potential future entrants already from the start. (18)

There is anecdotal evidence that VNU, the dominant publisher in the market, has used the shelving strategy. In 1986, De Telegraaf launched *Vrouw in Beeld*, a women's weekly. A few days after the launch, VNU came on the market with a magazine of the same format aimed at the same target group, *Vrouw Nu*. After only a few months, *Vrouw in Beeld* disappeared from the market. VNU then decided to stop publishing *Vrouw Nu* (Bakker and Scholten, 1999, pp. 41). In 1994, Quote Media launched *Santé*, a health magazine. A few days later, VNU came on the market with *Top Santé*, in a very similar format. To this day, both magazines are still on the market. On September 9, 1998, Audax launched *Vriendin*, a women's magazine aimed at the lower-income groups. Again VNU responded quickly by launching *Vrouw Vandaag*, targeting exactly the same readership (Hemels, 1998, p. 188), on September 17, 1998.

In all three cases, VNU introduced a very close product to make post-entry performance unprofitable or at least less profitable for the other publisher. Clearly, from the perspective of VNU, defending its market position in such a way may seem a legitimate and smart business strategy. Whether a business strategy is legitimate from the perspective of competition policy however, crucially depends on how dominant a market player is, as the case against Microsoft shows. (19) In the case of VNU, at least some worries are warranted.

4.5 The market for opinion magazines

The market for Dutch language opinion magazines in the Netherlands is rather small. It consists of only six magazines produced by six independent publishers. Ranked according to the average circulation between July 1, 1997 and June 30, 1998 these magazines are: *Elsevier* (133,000 copies), owned by Reed-Elsevier, *HP/De Tijd* (41,500), owned by Audax, *Vrij Nederland* (80,000), owned by Weekbladpers, *De Groene Amsterdamer* (14,900), owned by a publishing company of the same name, the religiously influenced *HN-Magazine* (10,400), owned by the Hervormd Nederland Oecumenische Pers, and *De Bazuin* (estimated 8,000), published by a foundation of the same name.

Table 4.7 contains summary statistics concerning total paid circulation and the share of subscriptions for all magazines but *De Bazuin*. No data were available for *De Bazuin*. We therefore omit this magazine from the rest of our analysis. The individual observation period depends on the availability of consistent circulation data in the NUV publications. During the whole observation period *Elsevier* had by far the largest paid circulation and, except for *HN-Magazine*, the highest share of subscribers.

Graph 4.2 depicts the aggregated total paid circulation of the five Dutch opinion magazines. Readership demand increased sharply in the early 1990s but since 1994 there has been a downward trend.

Graph 4.3 shows the time development of total paid circulation and subscriber share for the individual magazines. Since 1990 Elsevier has continuously increased paid circulation and the share of subscriptions. *Vrij Nederland* has lost readers since 1994 but managed to raise the share of subscriptions in 1997 and 1998. Similar to *Vrij Nederland*, *HP/De Tijd* has lost readers since 1993. *De Groene Amsterdammer* experienced a downward trend in total paid circulation between 1988 and 1994, resulting from absolute decreases in both subscriptions and newsstand sales (not shown here). In 1995, the turn-around was accomplished and has been continuing so far. *HN-Magazine* has continuously lost readers since 1987. The 1998 circulation was almost exclusively paid for by subscribers.

Graph 4.4 contains the development of magazine-specific paid circulation relative to the aggregate paid circulation of the five magazines. The observation period is 1991(=5) to 1998 (=12) because of the merger of HP and De Tijd in 1990. To capture the dynamics of these relative market shares, the right-hand part of the graph shows the first differences of the relative market shares (absolute changes in individual market shares). However, these changes in market shares have not been drastic in absolute terms.

Table 4.8 gives the pairwise correlation coefficients of these changes. Although the correlations should not be overinterpreted given the small number of observations, it seems clear that *Vrij Nederland* has lost market share not only to *Elsevier* but also to *De Groene Amsterdammer* and *HP/De Tijd*.

As the number of observations with respect to prices is too small for a more sophisticated analysis, we use graphs to investigate the publishers' pricing behavior. In Graphs 4.5 to 4.7 cover prices, subscription prices, ad-rates (black & white), and their respective changes are compared for *Elsevier*, *Vrij Nederland*, *HP/De Tijd*, and *De Groene Amsterdammer* over the years 1992 to 1998. No price data were available for *Vrij Nederland* before 1993 and for *HN-Magazine*. Therefore, we also had to exclude *HN-Magazine* from the analysis. The bar charts show price levels on the left-hand side and annual price changes (in per cent) on the right-hand side. Two points are worth making. First, both cover and subscriptions prices developped in such a way that they became almost identical for all four magazines in 1998. Second, concerning the ad-rate, *Elsevier*, the magazine with the highest circulation, has been able to charge clearly higher ad-rates than any of the other magazines. This result is in support of the insights gained from the theoretical model above.

Table 4.9 contains summary statistics regarding the price changes. *Elsevier* raised the cover price by 4.0% and the ad-rate by 4.4% on average annually, whereas the subscription price was raised by only 1.8%. *Vrij Nederland* raised cover price by 4.2% on average. However, until 1997 the increase was 6.0%. The cover price was lowered in 1998 by 2.9% after circulation had dropped by 10.4% in 1997. The subscription price rose by 3.6% and the ad-rate by 2.8%. *HP/De Tijd* also raised the cover price by about 4.0% and the subcription price by 4.2%. *De Groene Amsterdammer* raised the cover price by 6.8% and subscription prices by 7.0%. In competitive markets we would expect nominal prices (on which we have been focusing here) to increase in step with the general price level, at least on average. Almost all price changes of the magazine publishers however exceed the 1993-1998 average annual change in the consumer price index of +2.0%. [(20)] The implication is that either the costs of these publishers have risen more than the costs of other consumer goods producers, for which there is no evidence, or publishers have exploited market power.

As the correlation matrix in Table 4.10 shows, cover price changes of *Vrij Nederland*, *HP/De Tijd*, and *De Groene Amsterdammer* are positively correlated with the cover price changes of *Elsevier*. *HP/De Tijd* raised its cover price continuously and almost in step with *Elsevier*. The price development of *Vrij Nederland* and *De Groene Amsterdammer* is less in step with both other opinion magazines. Cover price changes of *De Groene Amsterdammer* correlate negatively with the cover price changes of both *Vrij Nederland* and *HP/De Tijd*. This basically means that *De Groene Amsterdammer* increased its cover price on average more than *HP/De Tijd* and *Vrij Nederland* in the years with common observations. Subscriber prices were raised by all magazines almost in each year. Looking at ad-rates, *Elsevier* increased ad-rates gradually. *Vrij Nederland* followed in some years, *De Groene Amsterdammer* kept the ad-rate more or less constant, whereas *HP/De Tijd* had to take back the price hike 1992/93 in subsequent years.

In sum, from the descriptive analysis a picture of the Dutch market for opinion magazines emerges in which *Elsevier* is clearly the market leader. The comparison of price levels and price changes across magazines and over time implies that *Elsevier* determines the price level both in the readership and advertising market. All other magazines follow Elsevier's lead, more or less. The reason may be that engaging in price wars in a stagnant market to gain market share is not worthwhile when you can reap (sufficient) profits "under the umbrella" of Elsevier.

4.6 Gossip magazines

Three publishers dominate the market for gossip magazines: De Telegraaf, Audax, and VNU. They have three magazines on the market which can be defined as very close substitutes. Ranked according to the average circulation between July 1, 1997 and June 30, 1998 these magazines are: *Privé* (381,817 copies, De Telegraaf), *Weekend* (261,281, Audax), and *Story* (291,671, VNU). Another gossip magazine, *Party* (117,238) is published by Wegener-Arcade. It was launched 1995. Circulation data for *Party* is only available from the NUV publication for 1998. From the *tariefkaarten* we have information on cover price and ad-rate for 1996 through 1998.

Table 4.11 presents descriptive statistics for total paid circulation, relative market share (*Party* excluded), and the share of subscriptions. The observation period is 1991 to 1998. Compared with the opinion magazines analyzed before, the gossip magazines have a substantially lower subscriber share. Regarding total paid circulation and relative market share *Privé* has been the leading magazine.

Graphs 4.8 shows the time development of aggregated total paid circulation of *Privé*, *Story*, and *Weekend*. Readership demand both in the aggregate and for the individual magazines has declined quite drastically in absolute terms from 1992 through 1998. Aggregate circulation of these magazines has decreased from 1,279,991 in the peak year 1992 to 934,769 in 1998. These figures clearly indicate that the market for gossip in printed media is saturated. The loss in readership is not very surprising, since many private TV channels run specific broadcasts focusing on the rich and the famous as well as on tragic stories. However the gossip magazines have loyal readers as well.

Graph 4.9 depicts the time development of subscriber shares. *Privé* and *Weekend* have a clear upward trend in the share of subscriptions, whereas the subscriber share of *Story* has remained more or less constant since 1988. Table 4.12 presents the correlation matrix of relative market shares, time development of which is shown in Graph 4.10. Between 1988 and 1993 *Weekend* gained market share from both *Privé* and *Story* but has lost to them again recently.

How was publishers' pricing behavior affected by the decrease in readership demand? In Graphs 4.11 to 4.13 cover price, subscription prices, ad-rates (black & white), and the respective price changes are compared over the years 1991 to 1998 except for *Party* (1996-98). Again the bar charts show price levels on the left-hand side and annual price changes (in per cent) on the right-hand side. Table 4.13 provides the respective summary statistics and Table 4.14 the correlation matrix of the price changes.

Despite decreasing circulation *Privé* slightly raised the cover price in steps by 1.4% on average, while raising the subscription price by 3.6% annually. Ad-rates were raised substantially from 1991 to 1992 but *Privé* lowered them again twice afterwards. *Weekend* raised cover price twice by about 12%. Subscription price and ad-rate however were raised four times by 6.5% and 8% respectively. The cover price of *Story* was raised four times by 6.3% on average. VNU raised *Story*'s subscription price three times by 7.9% on average and the ad-rate five times by 3.4% on average before reducing it again in both 1997 and 1998 by about 16% on average. Taken together, as shown in Table 4.14, price changes of Audax, De Telegraaf, and VNU are positively correlated but the coefficients are rather small except for the ad-rate changes of *Privé* and *Weekend*.

As circulation data for *Party* is not available for 1996 and 1997, it is not absolutely clear how the entry of Wegener-Arcade affected the other magazines. However, Table 4.15 compares the percentage changes of the ad-rate and circulation for the gossip magazines. Before *Party* entered the market in 1995, De Telegraaf, VNU and Audax had raised ad-rates continuously despite declining circulation. With the entry of *Party* we see substantial ad-rate reductions, first by De Telegraaf, then by VNU, while Audax kept the ad-rate for *Weekend* almost constant. At the same time, Wegener-Arcade was able to raise ad-rates. Of course, as we do not have any information on the volume of ads sold in these magazines and at what prices (package deals etc.), we can only state that the evidence in Table 4.15 below suggests that *Party* took away ad-demand, and probably also readership demand, from the other magazines, forcing them to revise their pricing behavior.

4.7 Men's magazines

Audax and VNU are the key players on the market for men's magazines, offering three magazines. Ranked according to the average circulation between July 1, 1997 and June 30, 1998 these magazines are: *Aktueel* (112,443, Audax), *Nieuwe Revue* (127,802, VNU), and *Panorama* (180,311, VNU).

Table 4.16 presents the summary statistics for total paid circulation, relative market shares, and the share of subscriptions. The observation period is 1991 to 1998. Subscriber shares are relatively high for these magazines. The reason is that they are included in "leesportefeuille" (see Chapter 2 above) which account for more than two-thirds of subscriptions. Based on relative market shares *Panorama* is the leading magazine.

Graph 4.14 depicts the time development of aggregate paid circulation. Since 1996 paid circulation has dropped significantly, breaking the positive trend of the early 1990s. Graph 4.15 reveals that this positive trend can be attributed to Audax's *Aktueel*. The VNU magazines *Nieuwe Revu* and *Panorama* show a clear downward trend in paid circulation. A downward trend is also present for the subscriber shares until 1996. These figures support the impression that the market for men's magazines is saturated as well. A look at Graph 4.16, which plots the relative market shares and its changes, as well as at the correlation matrix of Table 4.17 shows that *Nieuwe Revu* has lost market share to *Aktueel* but also - to a lesser extent - to *Panorama*.

Graphs 4.17 to 4.19 depict cover prices, subscription prices, ad-rates (black & white), and the respective price changes. Again the bar charts show price levels on the left-hand side and annual price changes (in per cent) on the right-hand side. Tables 4.18 and 4.19 provide the respective summary statistics and correlation coefficients of the price changes.

Aktueel kept cover price constant over the whole period but raised both the subscription price and the ad-rate three times. Despite decreasing circulation VNU raised cover prices, subscription prices, and ad-rates for *Nieuwe Revu* and *Panorama* almost annually. Taken together, Audax did not follow VNU in constantly raising cover prices. With respect to subscription prices, VNU's *Nieuwe Revu* and *Panorama* have fairly high negative correlation coefficients with regard to *Aktueel*. The reason is that VNU constantly raised subscription prices while Audax did so only irregularly. Concerning ad-rates only one larger correlation coefficient is interesting to mention. Not very surprisingly, ad-rate changes of the two VNU products correlate positively. Although the number of observations is rather small, it seems that VNU follows its own pricing philosophy, even against the odds of decreasing circulation.

5 The empirical relationship between cover price, ad-rate, and circulation

The theoretical model outlined in Chapter 3 has highlighted that circulation constitutes the link between the readership and the advertising market, thus affecting pricing behavior in both markets. In this Chapter we explore the empirical relevance of this link and try to answer the following questions: Are cover prices and ad-rates determined by circulation? Do prices feed back on circulation?

The bottleneck of any empirical analysis that is guided by a theoretical model like the one presented in Chapter 3 is always the availability of data to construct empirical variables that come as close as possible to the variables implied by the theoretical model. Unfortunately, important variables of the theoretical model such as marginal cost, revenue from selling advertising space, or the amount of space dedicated to editorials and ads are not available for individual magazines. We do not even have sufficient balance sheet information on costs (to approximate marginal cost by average variable costs) or revenue sources at the publishers' level. However, the panel structure of our data set, that is, the combination of cross-sectional and time-series information, allows us to control for systematic but unobservable influences by including specific effects such as publisher- and time-specific effects.

5.1 The empirical model

The empirical model

(1) $$y_{it} = \sum_{j=1}^{J} a_j + \sum_{t=1}^{T} d_t + \sum_{k=1}^{K} b_k x_{kit} + u_{it}$$

relates the endogenous variable *y*, for which we will insert cover price, ad-rate, and circulation, to a set of right-hand side variables *x*, among which will be, for instance, readership characteristics.

The subscript $i = 1,\ldots,71$ identifies the individual magazine and the subscript $t = 1991,\ldots,1998$ denotes time periods. The parameter *a* indicates dummy variables that stand for individual publishers ($j = 1,\ldots,17$) or magazines ($j = i$), whereas *d* denotes time-specific effects, *u* is a standard regression error. The *k* coefficients *b* will be estimated by Least Square techniques (2SLS-instrumental variable, to account for potential simultaneity of right-hand side variables). All price variables have been deflated by the implicit deflator of the Dutch Consumer Price Index (1991 prices).

5.2 The results

Table 5.1 reports the regression results for our preferred model specification in which we assume cover price, ad-rate, and circulation to be jointly determined by a set of exogenous (predetermined) variables to be discussed below. The upper part of the table names the right-hand side variables included in the respective regression equations for which the estimated regression coefficients are presented in Columns 2 to 4. The lower part of the table contains test statistics which indicate (1) whether specific effects (publishers, magazines, time) are statistically relevant, and (2) whether circulation, ad-rate, or cover price are endogenous in the respective regression equations in which they are included as "explanatory" variables ("Wu-Hausman" test statistic), given a statistically appropriate (valid) set of predetermined variables (instruments, "Sargan" test statistic). (21)

Pricing in the readership market (Table 5.1, Column 2)

We have specified cover price as a function of circulation, ad-rate, rivals, newsstand copies, share of low-income readers as well as publisher- and time-specific effects.

The empirical relationship between cover price and **circulation** might give some indication of whether substantial scale economies exist. As costs for maintaining printing facilities, editorial staff etc. do not vary with circulation, and as these costs have been claimed to be huge, it can be expected that the average cost curve declines rapidly at low levels of sold circulation and flattens out with increasing circulation. Economic theory predicts that competition will force publishers to pass cost savings on to the readership and to advertisers in form of lower prices. If higher circulation reflects lower per-copy costs, and competition is effective, magazines with a higher circulation should have a lower cover price (Stigler, 1964). The regression coefficient on *log circulation* should then be negative. This prediction is fully supported by the statistically significant coefficient in Table 5.1.

If the **ad-rate** indicates that selling advertising space contributes significantly to a publisher's total revenue, we expect a negative relation between cover price and ad-rate. As shown in the theoretical model in Chapter 3, cover prices should be higher without revenues from advertising. In our regression the coefficient on the ad-rate is significantly positive. Magazines that charged high ad-rates also charged high cover prices.

This seems to contradict the prediction from the model if we equate a higher ad-rate with higher ad-revenue relative to revenue from selling the magazine. However, a higher ad-rate may rather indicate a *lower* share of ad-revenue. If the publisher exerts market power in the advertising market by setting a higher price he will lose (some) ad-demand given the standard negatively sloped demand curve. The ratio of advertising revenue to revenue from selling the magazine may then become smaller, implying in the terms of our model an increase in the cover price ceteris paribus.

The re-formulated profit maximization conditions of the theoretical model do not imply any *causal* relationships per se but rather simultaneity. We tested whether circulation and ad-rate can be considered exogenous to cover price in this regression. The so-called Wu-Hausman test statistic does indicate simultaneity between cover price, circulation, and ad-rate. [(22)]

We have included the variable **rivals** which counts the number of independent publishers - as far as it was possible to identify them - in each market segment and each year. Our theoretical model implies that more competition in the form of a higher number of independent suppliers in one of the two connected markets should lead to lower prices in this market but may raise price in the other market - ceteris paribus. If the market for the readership is the competitive market, we expect cover prices to be lower when a larger number of independent publishers is active. By contrast, if the advertising market is the competitive market, the opposite relation between cover price and rivals is implied. Then at the same time however, we should observe a negative impact of rivals on ad-rates.

The coefficient on rivals in the cover price equation is indeed positive but not significantly so at a conventional level of significance. A look at the ad-rate equation, which will be discussed in more detail below, shows that the number of rivals affects the ad-rate significantly negative. Taken together, these results support the impression that price competition takes place in the advertising market, whereas publishers exercise market power in the readership market to raise prices.

A high **share of newsstands copies** in total paid circulation implies that a relatively large part of circulation is subject to uncertain and fluctuating demand which may be affected by cover price changes. Following standard price theory, we expect that under demand uncertainty the publisher sets a lower cover price than under perfect foresight. Therefore, an inverse relation between cover price and the share of newsstand copies is implied.

However, as a higher subscriber share gives publishers more planning security, the publisher has an incentive to set a higher cover price to reduce newsstand demand, but to simultaneously reward magazine subscribers by offering substantially lower per-copy prices via subscriptions. The implication of this argument is a positive relationship between cover price and the share of copies sold via newsstands. For our data set we indeed find a significantly positive coefficient which supports the latter argument.

We included the **share of low-income readers**, since magazines which attract more readers from the lower-income spectrum should have lower cover prices. This prediction is also borne out by the empirical evidence. The coefficient on low-income readers is negative and statistically significant.

As we do not have any information on publishers' costs, we have included publisher- and time-specific dummy variables to control for these unobservable but systematic differences. These specific effects turn out to be highly significant as the summary test statistics show. (23)

Ad-pricing (Table 5.1, Column 3)

Ad-price is hypothesized to depend on circulation, cover price, rivals, subscriber share, share of high-income readers, the share of shoppers, publisher-specific effects, and time-specific effects.

Based on the scale economies argument, we expect ad-rates to decline in **circulation**. However, higher circulation may also attract more advertising. At a given space dedicated to advertising, ad-rates should increase in circulation. (24) Empirically, circulation is indeed significantly positively related to the ad-rate. **Cover price** is also positively related to the ad-rate. The Wu-Hausman test statistic confirms that cover price and circulation are endogenous in the ad-regression. We have already discussed the inclusion of **Rivals** in the ad-equation in connection with the cover price equation above.

The **subscriber share** can be seen as an indicator of readers' brand loyalty. Magazines with a large share of subscribers and known readership characteristics should be particularly attractive for advertisers, since uncertainty about reaching the targeted readership is reduced. Magazines with a higher share of subscriptions can therefore be expected to have a higher demand for advertising space so that advertising rates are higher at any given circulation. The subscriber share has the predicted positive coefficient which is also statistically significant.

The readership characteristics of a magazine should be extremely important for advertisers. To capture the discretionary spending power of readers, which is what advertisers are basically interested in, the ad-rate regression equation contains the **share of high-income readers** as well as the share of readers identified as those mainly doing the household's shopping (**shopper**). For both variables a positive impact on ad-rates can be expected and is supported by our estimates.

Publishers offer not only discounts on repeated advertising but, more importantly, also "package deals" and very customer-specific arrangements on which we do not have any information. The ad-rate we are using might thus not fully reflect that publishers operating in different market segments may have cost advantages (scope economies) and, due to a larger portfolio of magazines, are more attractive for advertisers altogether. To account for such potential bias we have again included publisher-specific dummies together with time dummies. Both sets of dummy variables are statistically highly significant so their inclusion is clearly warranted.

Circulation regression (Table 5.1, Column 4)

The circulation equation includes the **cover price** but not the ad-rate, since there is no logical argument for a *direct* link between the price charged for ad-space and readership demand. Why should readers stop to buy a magazine when the ad-rate is raised? Of course, there is the *indirect* link our theoretical model has highlighted. As argued above, a higher ad-rate may reduce the share of ad-revenue relative to the share of revenue from selling the magazine, thus affecting the cover price positively. The potential indirect effect on circulation emanating from publishers' pricing decisions in the advertising market can therefore be expected to be picked up by the cover price.

Magazines with a higher cover price tend to have a lower circulation. The coefficient of cover price is statistically significant. Again the Wu-Hausman test statistic is highly significant, or put differently, cover price is not exogenous to circulation. This result completes the picture. Cover price, ad-rates, and circulation are jointly determined.

The regression equation also includes the magazine's share in the total readership which should have a positive impact on paid circulation. Also a higher share of readers from the big cities Amsterdam, Den Haag, and Rotterdam (*top cities*) can be expected to affect total paid circulation positively. Both coefficients have the expected sign but are not statistically significant.

Of course, the quality and scope of content should affect readership's demand and thus circulation. As shown in the theoretical model, the number of editorial pages per issue or, respectively the proportion of editorial pages to ad-pages, may be a reader's most important decision variable. As data on the allocation of pages to editorials and ads were not available, we have included magazine-specific effects to pick up these differences. These magazine-specific effects turned out to be highly significant. [(25)]

What can be learned from the regression results?

We tried to test the link between circulation and prices empirically. Given data constraints, we could only explore some relationships implied by the theoretical model of Chapter 3. To mirror the simultaneity of potential links between variables, as reflected in the re-formulated profit-maximization conditions, we used a simultaneous equations set-up for the regression analysis.

In sum, the empirical evidence supports the view that cover price, circulation, and ad-rate are linked in ways consistent with the theoretical predictions. The basic result is that publishers charge lower cover prices but higher ad-rates for magazines with a higher circulation. There is also evidence that a larger number of independent publishers in a market segment reduces ad-rates but not necessarily cover prices. Put differently, competition in the ad-market does not mean that publishers compete on prices also in the readership market.

Link with theory of relevant market clusters

How can we link the regression results with the theory of relevant market clusters, as developed in the General Framework? We observed that the ads market is more competitive than the readership market. This is what one expects, since firms that1 want to advertise have plenty of alternative opportunities, in contrast to readers eager to know something about, say, the latest leather fashion. Assume we want to assess market performance on the readership market for e.g. gossip. This identifies the market for gossip magazines as the **pivotal** market (step 1)**.**

Connected markets (step 2) are other markets where VNU, De Telegraaf and Audax meet (Women's weekly, Women's monthly, Motoring, TV Guides, Lifestyle, Youth, Home Improvement). These connected markets partly coincide with the markets that are connected through demand links (Women's weekly, Women's monthly, Men's). Another connected market (vertical link) is the ads market. Publishers such as VNU or Audax can offer package deals to advertisers, creating entry barriers in this way, since publishers who are not active on other markets are less able to offer similar packages. The final connected market is the market for distribution channels, the control of which has the potential to raise entry barriers on the readership markets, as the NMa case against Audax showed (NMA, 1998). This sums up the **relevant market cluster**.

The third step involves checking **market performance on the pivotal market over time**. As said before, sophisticated analysis requires firm level cost data, so we have to rely on some general indicators. (i) Entry has been rare. Sometimes new magazines appear but they are usually from incumbent publishers, such as *Party* launched by another big player, Wegener-Arcade. (ii) Profitability has been reasonably high. (iii) The key players VNU, Audax, and De Telegraaf raised prices almost annually despite decreasing readership demand. (iv) Market shares have been fairly stable. (v) As entry occurred, the incumbents changed their pricing behavior, at least in the ad-market. Taking these points together, there is some evidence that the leading Dutch publishers enjoy a rather quiet life as long as not another big player comes along and shakes up their cosy world.

A fourth step has to be taken if performance is considered as disappointing. The **check on behaviorial and institutional reasons for current or future entry barriers on the pivotal market** does not point at institutional barriers. Entry barriers are raised by: (i) package deals on the ads market; (ii) predatory occupation of niches in connected markets (see section 4.4 and Hemels, 1998, p. 188), which scares off future entrants; (iii) multi-market contact on several connected markets; (iv) control of distribution channels.

The fifth step, assessing whether above **activities** are **in fact anti-competitive**, is beyond the scope of this study. This analysis does show the potential for such activities and demonstrates the strength of the methodology introduced in the General Framework. Notice that the above analysis on relevant market clusters took one pivotal market as an example. Any of the other submarkets can be analyzed along similar lines.

6 Conclusion and policy implications

This case study has investigated the Dutch market for consumer magazines. In crucial parts of the investigation we had to make use of simple descriptive statistics and graphs instead of more sophisticated techniques because important information (such as cost data) to evaluate pricing and strategic behavior of publishers has not been available at the magazine or publisher level. Nevertheless some interesting results emerged.

As shown in a simple theoretical model, it is profit maximizing for a publisher to use pricing power in the advertising market to subsidize the price charged from the readership if readers value content. The results from our regression analysis basically support the strong link between circulation and pricing in the readership and advertising market described by the theoretical model.

Indeed, Dutch magazines with a higher circulation are sold at lower cover prices, while ad-rates tend to be higher for these magazines. Of course, since no cost data are available, it remains unclear whether Dutch publishers exploit readers or advertisers by charging unduly high prices. Still, as Dutch magazine publishers have not integrated other media like TV or radio in a way observed in other European countries, both consumers and advertisers have independent alternatives to satisfy their demands.

Some activities of the leading Dutch publishers do raise concerns and definitely warrant more attention in the future. Our study shows that magazine publishers have enjoyed substantially higher profits since the late 1970s than either newspaper publishers or the average manufacturing firm. On the cost side, our analysis does not suggest that magazine publisher are burdened with a fixed cost load that is very different from manufacturing. The case for highly concentrated market structures to cope with fixed costs is thus not very strong.

The market structure in Dutch magazine publishing can be characterized as oligopolistic. Product differentiation in form of publishing special-interest titles is ubiquitous and on the rise, since the market has been stagnating for quite some time. However, and contrary to what you expect following economic theory, this product differentiation has not led to something like a monopolistically competitive market structure (in the sense of Chamberlain).

Rather, a few large publishers produce almost all the magazine titles. In some market segments, as for example opinion magazines or glossies, a market structure with only a few large suppliers, called "narrow oligopoly" in economic theory, can be found to exist. More worryingly, it seems to has been existing for many years without really challenging entry from new suppliers. In the mentioned market segments, we find some evidence that is more consistent with tacit pricing behavior than with Bertrand price competition.

Further, anecdotal evidence suggests that the key players in the market have substantial market power to shield their profits from being eroded by entry. The example of VNU's reaction to the launching of new magazine titles by rivaling publishers makes clear that powerful publishers need not fight costly price wars but can resort to effective non-price weapons to discourage new entrants. Clearly, if the relevant firm-level information were available, we could use the methodology developed in the "Indicators project" (Boone, 1999) to track changes in relative price-cost margins, that is, publisher-specific price-cost margins in relation to the market's minimal price-cost margin, over time.

If the publisher's industry is really competitive in the sense that economic profits are subject to quick erosion over a reasonable time span, this should show up in the Boone-indicator. Even without such a more sophisticated analysis, the general picture of barely any entry of new publishers, fairly stable market shares of established magazines, and indications of higher than average profit margins at least point at a lack of competition. The general picture is: why bother to enter a saturated market that is well-protected by incumbents' strategies? So publishers of consumer magazines seem to enjoy a relatively quite life.

Potential new publishers hoping to enter because the ICT revolution facilitates producing a magazine at a lower cost than in the past, face at least two major entry barriers. First, by producing substituting and complementary titles ("multi-title publishing") the leading publishers have already occupied market niches that may be attractive for potential newcomers. Multi-title publishing and cross-media activities (e.g. books, business information, TV etc.) may crucially raise the publisher's "visibility" and thus the ability to offer attractive "packages" of advertising opportunities to advertisers. For example, if an advertiser wants to target a specific group of readers he will almost certainly find a VNU magazine that has the preferred readership profile. If advertising plays a major role for a new publisher to bring a magazine to the market, he has to be prepared to enter two connected markets, the readership market and the advertising market. But that may not be good enough to be viable in the longer term because the magazine needs to be distributed.

Here comes the second entry barrier into play. Control over certain distribution channels and outlets makes it hard for new publishers without deep financial pockets to enter the market. Established publishers may block new rivals by simply having well-functioning distribution systems at their disposal. The NMA case against Audax highlights the potential for anti-competitive behavior. In sum, new publishers, by using advanced IC technologies, might be able to produce a magazine very cheaply but marketing and selling the printed magazine may be quite a different venture.

Taken together, policy makers should be on the look out for anti-competitive actions taking place in upstream or downstream markets. They should not be blinded by cost arguments that support concentrated market structures, or by arguments sometimes advanced, that diversity in content can only be guaranteed by suppliers which have pricing power to cross-subsidize otherwise unprofitable minority demands.

In a saturated market where entry is discouraged e.g. by niche predation and advertisers who seem more interested in mass than niches, there can emerge a tendency towards the lowest common denominator content. Incumbents do not want to occupy all niches because the niches cannibalize on their core magazines. However, even less wanted for incumbents is when other firms occupy these niches. This can lead to unoccupied potential profitable niches, at the expense of diversity.