

# Who Owns Cable Television? Media Ownership Concentration in Taiwan

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This study examines ownership concentration in Taiwan's cable television industry by using concentration ratios (CR4 and CR8) and finds that Taiwan's cable systems and channels are highly concentrated in the hands of a few media conglomerates, meaning that the cable industry has become more oligopolistic. Communications researchers in Taiwan should pay more attention to media ownership concentration across various communications industries or conduct further studies on cross-industry concentration in the communications sector.

Taiwan's cable television industry emerged in the late 1970s as an underground medium because the Taiwanese government had banned the new service from its outset, arguing political and national security concerns. Yet, Taiwan's population quickly embraced cable television due to the paucity of programming provided by the three terrestrial television stations. Consequently, Taiwan's cable television industry was a significantly profitable venture, despite being illegal.

After cable television was legalized in July 1993, the industry experienced tremendous changes in terms of its market scale and structure. The penetration rate of Taiwan's cable television service increased rapidly, going from 39.3% in 1992 to 56.2% in 1993, and growing to 66.3% in 1994 ("The growth rate of cable television," 1997). Moreover, Taiwan's business conglomerates paid more attention to the "new" profitable service and became interested in cable television operation. As a result, mergers and acquisitions among Taiwan's cable systems have dramatically changed operation and ownership of the cable industry.

In 1996, around 130 cable television systems were operating (Yang, Kwan, & Mo, 1996), down from 501 in 1993 (Taiwan Provincial Government, 1994). Currently about 100 systems serve Taiwan. According to the government, the highest merger rate was located in Hualien County, eastern Taiwan, during 1993–1994. The amount of cable system operators in the county declined from 27 in 1993 to only 3 by 1994 (Taiwan Provincial Government, 1994). Apparently, the tendency toward ownership concentration and market conglomeration in the cable television industry has not been surprising to Taiwan's business community.

## BACKGROUND

Since the 1980s, the most dynamic aspect in Taiwan's media industry has been the rapid proliferation of cable television (Heuvel & Dennis, 1993). Due to Taiwan's mountainous topography, its community antenna television (CATV) systems emerged when privately operated systems were built to serve as television signal boosters and clarifiers to strengthen broadcasting signals from terrestrial television stations to households in remote areas with poor reception. Based on information from government records, Wong (1984) states that Taiwan's first cable television system started in Keelung, a harbor city in the north of Taiwan, in 1979. However, the cable television industry claims that the earliest cable television system emerged as early as 1969 (Kwan, 1992; Hsu, 1996).

In Taiwan, cable television has commonly been known as *the fourth channel*<sup>1</sup> in order to differentiate it from the existing three legal terrestrial television stations. Research indicates that Taiwan's initial fourth channel operated similarly to the current cable television system. As many people predicted, the illegal fourth channel became more and more popular after the 1980s because it provided more programming choices than did broadcast television (Tsang, F. T., 1989).

In the 1990s, Taiwan's underground cable television industry enjoyed speedy growth after the Taiwanese government legalized Ku-band satellite receptions in late 1988 and home installation of C-band satellite dishes in 1992 (Rampal, 1994). The penetration rate of cable television in 1990 reached 11.35% of television households, with Taipei City at 10.9% and some counties reaching penetration rates as high as 23% (Fu, 1991). In the early 1990s, fourth channel operators provided subscribers with 30 to 40 channels and 24-hour programming for a bargain-basement monthly fee of US\$11 to US\$22 (Hwang, 1996a).

The fourth channel was exposing its audience to a wide range of programming, such as unauthorized Hong Kong soap operas, Japanese variety shows, pirated movies, and even pornography (Tsang, F. T., 1989). As Palmer (1992) observed, fourth channel operators simply played a selection of videotapes rented from local

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<sup>1</sup>The fourth channel is the colloquial name for unsanctioned cable television systems in Taiwan.

video stores. In addition, some offered stock market information, weather reports, language lessons, travelogues, and even religious programs with content ranging from Buddhist to Roman Catholic.

Nevertheless, the Government Information Office (GIO), Taiwan's regulatory institution for media, declared that the fourth channel violated the Broadcasting and Television Law, the Copyright Law, the Criminal Law, the Sales Tax Law, and relevant telecommunications laws (Government Information Office, 1991). It is interesting to note here that the basic ideology behind Taiwan's regulations prior to the 1970s was that something was illegal if it was not specified as legal by statute. Consequently, the fourth channel was, *ipso facto*, illegal because there were no regulations governing the cable television industry at the moment of its emergence. The GIO claimed that the fourth channel violated broadcasting laws simply because these laws did not dictate how cable television could be operated or how to regulate the new medium. Thus, the Taiwanese government prohibited the fourth channel from its beginning.

However, the government's effort barely had any effect. The strong demand from audiences for variety in television programming had made cable television extremely profitable and began to lure more people to invest in the business (Liu, 1993). For instance, by broadcasting pirated programming and paying no copyright royalties, the fourth channel enjoyed booming success and brought in revenue of approximately US\$185 million annually for its operators from the mid-1980s to 1993, the time before the government legalized the cable industry (Baum, 1993). Even though the government did not recognize the industry as a legal business in Taiwan, expansion of cable television never stopped during the last decade. The total number of operators involved in cable television increased significantly, and the entire industry operated outside of government control (Shih, 1992). According to a survey conducted by the Taiwan Provincial Government (1994), the number of system operators and subscribers increased from 125 systems and 800,000 subscribers in 1989 to 625 systems and 2 million subscribers in 1993. In other words, the number of cable television systems increased five-fold and subscribers more than doubled within four years.

In early 1990, more than 200 fourth channel operators formed the Cable Television Association, hoping to promote self-regulation and to achieve legalization. In September 1990, 21 fourth channel operators—with the support of Taiwan's largest opposition political party, the Democratic Progressive Party (DPP)—set up their own organization, the National Democratic Cable Television Association, to fight for their cablecasting rights (Tsang, Y. C., 1991). Moreover, more than 100 fourth channel operators, who had long been in this industry, became the most active lobbyists by organizing the Association for Broadcasting in Cable Development and won the support of several legislators while the law was being formulated. Meanwhile, in response to the call for legalization from fourth channel operators, the Executive Yuan (similar to the U.S. State Department) drafted the

Cable Television Law in August 1990, and the Legislative Yuan (similar to the U.S. Congress) passed the law in July 1993.

After the enactment of the Cable Television Law, mergers and acquisitions became commonplace in Taiwan's cable industry. In November 1993, the GIO released temporary regulations for the illegal fourth channel before the government issued licenses; 680 systems came to register. This number dropped to 300 system operators at the end of 1994 and further decreased to 150 in early 1996 (Hwang, 1996b). Thereafter, this tendency toward ownership concentration and conglomeration was repeated in the cable market (Yu, 1996), such that the number of cable system operators decreased from 150 in 1996 to approximately 100 in 1999.

The King Channel CATV Company is a perfect example of this merger mania. King Channel has a system with 85,000 subscribers in Taipei City, and it is the product of mergers and acquisitions of 10 independent systems. In Taipei County, northern Taiwan, the total number of cable systems declined from 75 in early 1990 to around 20 by mid-1997 (Yuan, 1997).

## THEORETICAL ASPECTS AND LITERATURE REVIEW

In the process of searching for profits, capitalists are continually forced to eliminate competitors in order to reduce the expenses and risks generated by competition. In the process of seeking solutions, this merger-acquisition strategy has definitely become a dominant tendency in modern capitalism (Bettig, 1996).

The Report of the Special Senate Committee on Mass Media of Canada suggested a number of factors that accelerate the trend toward concentration: (1) large corporations can easily raise necessary capital, (2) competition encourages large corporations to withstand short-term losses until they eliminate competitors, and (3) concentration generates higher profits (Clement, 1975). Similarly, Fusfeld (1988) lists the forces encouraging concentration within the modern economy: (1) a strong technological imperative, (2) the need for predictable profit rate, and (3) assured economic planning. In addition to these factors, Murdock (1994) adds that privatization encourages economic concentration.

Economic concentration refers to "the extent to which the economic activity of an industry or the whole economy is conducted in the largest firms" (Bowles & Edwards, 1985). As early as the 19th century, a phenomenon became increasingly clear. State interference in the mass media was being replaced by the ideological influences of media owners (Murdock, 1994). Since then, the trend toward corporate concentration has taken place not only in the U.S., but also around the world (Dye, 1995; Fusfeld, 1988). Large corporations have become the central institutions of our age, similar to the position of the Roman Catholic Church during the Middle Ages.

To answer the question of how concentration occurs in large U.S. corporations, Fusfeld (1988) presented four stages of concentration in the United States. The

first stage came between the late 19th century and the early 20th century (1897–1898 to 1902–1903) and marked the emergence of the capital market. The second stage began after World War I (1924–1925 to 1930–1931) and marked the emergence of the oligopolistic market. The third stage began in the mid-20th century to the 1970s and marked the domination of large corporations. Finally, the stage after the 1970s marked the growth period of conglomerates.

Currently, economic power in the United States is highly concentrated in a small number of corporations, whose power is increasing gradually over time. The 200 largest corporations controlled over 60% of total U.S. assets in 1977, increasing from 45% in 1945 (Herman, 1981). Based on 1990 figures, the 100 largest corporations controlled 74.6% (\$1.2 trillion) of the nation's total industrial assets (Dye, 1995). The five largest corporations—General Electric (GE), General Motors (GM), Ford Motors, IBM, and Exxon—control over 28% of total industrial assets (Dye, 1995). In sum, data from the Federal Trade Commission show that the average degree of concentration in U.S. industries is approximately 60% (Fusfeld, 1988).

Three primary forms of corporate concentration are evident in the communications industry: (a) to own a large number of firms within a single medium, that is, to increase the concentration of market share (Albarran, 1996), (b) to cross-own distinctive media (Wasko, 1984), and (c) to add ownership of a whole array of media, not just one medium and not just cross-ownership of different media (Murdock, 1982). For example, Time Warner (now AOL Time Warner) owns various media outlets including film and television studios, television stations, cable channels and systems, music record labels, and magazines (“Big and bigger,” 1995).

Researchers have noticed that the mass media have been among the favorite targets for concentration activities (Dye, 1995; Exoo, 1994). Dye reveals that concentration in the communications sector is even greater than in other industries. Zucconi (1986) shows that 98% of U.S. daily newspapers have no competition; 1,656 of 1,700 dailies are the only newspapers in their respective cities. Bagdikian (1989) stated that most local newspapers are monopolies. The three largest television firms own one third of all radio and television stations; the seven second-largest firms own only one tenth. The two largest cable television multiple system operators (MSOs) serve more than one third of all subscribers. Furthermore, a study conducted by Monroe found that the concentration of ownership in the media occurred not only within the four major media (newspapers, magazines, radio, and television) but also across the media industry as a whole (Monroe, 1967, cited in Clement, 1975).

In his study of media chains and groups from 1977 to 1989, Waterman (1991) found that national ownership concentration level had increased for the four largest daily newspaper chains (from 20.9% to 24.7%) in terms of their average daily circulation, the four largest cable television multiple system operators (from 24.5% to 37.3%) in terms of their basic subscribers, and the four largest movie theater operators (from 13.8% to 30.1%) in term of their screens, whereas concentra-

tion of broadcast television station groups experienced a slight decline (from 20.8% in 1977 to 19.9% in 1989) in terms of their average net weekly circulation. In addition, the production of filmed entertainment was dominated by 11 large firms, which obtained 89.2% to 98.7% shares of domestic film rentals between 1987 and 1992 (Wasko, 1995).

In regard to the U.S. cable industry, a significant consolidation of ownership of cable systems has taken place through a combination of mergers and acquisitions during the past two decades (Howard & Ogles, 1994). The market share of the 50 largest MSOs increased from 60.1% in 1972 to 74.2% in 1985, and to 82.3% of all subscribers in 1994 (Howard & Ogles). Chan-Olmsted (1997) reviewed the mergers and acquisitions in the U. S. cable industry and discovered that mergers and acquisitions increased significantly between 1991 and 1995, especially after 1993. Accordingly, Howard and Ogles confirmed that large corporations control most cable systems in the United States.

Examining the degree of concentration in the cable television industry using *concentration ratios* (CRs), Atkin (1994) found that the CR of the four largest firms (CR4) of the cable television industry was 24.2% in 1983; but by 1992, the CR4 had expanded to 42.3%. In early 1995, according to another study, the CR4 was 49.4%, and the CR of the eight largest firms (CR8) was 63.6%, which implies that the cable television industry is a moderately concentrated market structure with strong market power centralization in the hands of the four largest firms (Chan-Olmsted, 1996). In conclusion, Howard and Ogles (1994) commented that concentration of ownership in cable television was expected to accelerate as the industry continued to consolidate.

## MEASURING CONCENTRATION OF OWNERSHIP

In this article, concentration of ownership refers to the degree to which a particular industry is controlled by individual firms. Three indexes have been developed that attempt to measure the concentration of structural competition in markets since the 1950s: the CR, the *Lorenz Curve*, and the *Herfindahl-Hirschman Index*. The CR is used to compare the ratio of total revenue of the major players in a particular market, the four largest firms (CR4) or the eight largest firms (CR8), with revenue of the entire industry. The Lorenz Curve interprets the inequality of market share among different firms. The Herfindahl-Hirschman Index is calculated by summing the squared market shares of all firms in a given market to provide a measure that varies from 0 to 10,000 (Albarran, 1996; Bates, 1993; Waterman, 1991). The CR dominates as the research focus for analysis of market power and its effects, whereas the Herfindahl-Hirschman Index is probably the most sophisticated measurement (Albarran, 1996; Shepherd, 1987). In order to gauge market concentration, the U.S. Department of Justice primarily relies on both indexes (Atkin, 1994).

Because CR is the prevalent measure for market concentration within a particular industry and has been frequently used to measure concentration within media industries (Albarran & Dimmick, 1996), this study employs CR to investigate market concentration and conglomeration of Taiwan's cable television industry. In addition to calculating the CRs (CR4 or CR8) of Taiwan's cable system and channel markets, this study also investigates ownership concentration of media conglomerates/chains in the cable market by calculating chain CRs (chain CR4 and CR8). The chain CR of the cable system market is calculated by comparing the ratio of total subscribers served by the major cable conglomerates, or MSOs, to the subscribers of the entire market. Meanwhile, the chain CR of the cable channel market compares total revenue of the major players to total revenue of the entire market.

Commonly, if the four-largest-firm ratio (CR4) is equal to or greater than 50%, or if the eight-largest-firm ratio (CR8) is equal to or greater than 75%, then the market is considered highly concentrated (Albarran & Dimmick, 1996). Following the guidelines of the U.S. Justice Department, this study regards a market to be concentrated if the CR4 is higher than 35%, or the CR8 is higher than 50% (Atkin, 1994; Chan-Olmsted & Litman, 1988).

In short, this study investigates the following research questions:

RQ1: What are the CR4 and CR8 of Taiwan's cable systems?

RQ 2: How many cable systems do the major media chains of Taiwan own?

RQ 3: What are the chain CR4 and chain CR8 of Taiwan's cable system market?

RQ 4: What are the CR4 and CR8 of Taiwan's cable channels?

RQ 5: How many cable channel companies do the major media chains of Taiwan own?

RQ 6: What are the chain CR4 and chain CR8 of Taiwan's cable channel market?

## METHOD

As of October 1999, 133 cable system companies and 66 channel companies (operating 109 cable channels) had registered with the GIO. After contacting all systems and channel companies by phone, the researcher found that some had merged, gone out of business, or had operated less than 1 year before this study began. Therefore, the total qualified sample for this study consists of 96 cable systems and 52 channel companies.

In fact, no official statistical data, such as total subscribers and annual revenue, is available to the general public or for this study because almost all of Taiwan's cable systems are not yet publicly owned. First, the researcher mailed a letter with

a simple questionnaire survey to each cable system and channel company in November 2000, requesting basic operation data. The major questions in the survey focused on ownership, incomes and expenses, numbers of subscribers, and average revenue in 1998. Approximately 3 weeks later, 49 cable systems companies and 31 channel companies had responded to this survey and mailed questionnaires back. The response rates were 51% and 60%, respectively.

Following the simple questionnaire survey, other research methods were employed to acquire additional data from all cable system and channel operators. Telephone and personal interviews with presidents, managing directors, or financial managers were conducted, explaining the research purpose again and persuading them to release necessary figures and information for this study. After contacting all cable system companies and channel companies, the researcher obtained supplementary but substantial market data released by reliable but anonymous professionals working in cable-related industries, including people in high-ranking management positions of cable channel distribution agents and advertising agencies, as well as cable market analysts. With constant pursuit, the researcher obtained all data of revenue from the top 10 cable channel companies for the CR4 and CR8 ratio calculations.

Even though multiple methods were employed to gather the required data, obtaining the revenue figures from all cable system operators remained problematic. The major reason why most cable system companies were unwilling to release their revenues was because they are privately held companies; hence, they considered these figures to be proprietary. Despite that the usual denominator for calculating CRs is revenue, researchers comment that there seems to be little reason to expect nonrevenue measurements to be biased (Waterman, 1991). In addition, the CR to be used is often determined by which statistics are most available (Chan-Olmsted, 1996). As a result, this study does not use average revenue as the unit of measure for calculating CRs of the cable system market, but, instead, uses the number of subscribers. As mentioned in the previous section, this study calculates the CRs of both the system market and the channel market, as well as the chain CRs to investigate media chain ownership in Taiwan.

During the research process several problems emerged. First, data concerning the cable industry is difficult to delineate because almost all cable system companies and cable channel companies are privately held. Second, there is no single source, including government institutions and industry associations, that collects all necessary figures, such as subscribers and revenue for this study. Therefore, this study had no alternative but to contact various sources to collect as much data as possible and to employ mixed research methods.

In addition, figures collected from various sources are not usually consistent. It is often confusing and troublesome to investigate which figure is more accurate if figures released by various sources have large differences. To obtain reli-



able data to ensure the credibility of this study, the researcher cross-examined all collected data in detail, and made several contacts with senior market analysts and high-ranking industry insiders. As an example, the difference between the figures for total cable paying subscribers in Taiwan between the two largest cable channel distribution agents was less than 1%. In other words, even though the figures collected by this study are not official data and are culled from various sources, it is fair to consider that they are comparatively reliable and presumably identical to market facts. As a result, this study added up all figures received from all sources, then divided the figure by the number of sources to determine the final number of subscribers or revenue for analysis.

## RESULTS

As has occurred in the United States, the tendency toward conglomeration exists in Taiwan's cable television industry, where the number of system operators decreased from 625 in 1993 to around 100 at the end of 1999. Taiwan's cable system market is currently dominated by four domestic media conglomerates, including two large MSOs—the United Communications Group (UCG) and the Eastern Multimedia Group (EMG)—and two small MSOs—the Pacific Media Group and Jia-Sheen Group.

At the end of 1999, Taiwan had approximately 3.21 million paying subscribers, about 57% of 5.6 million existing households.<sup>2</sup> Currently, 650,000 to 800,000 pirate cable receivers exist in Taiwan (approximately 20% to 25% of paying subscribers).<sup>3</sup> Therefore, by rough estimation, the penetration rate of Taiwan's cable service during 1999, including both paying subscribers and pirate receivers, was around 70%.

As of October 1999, there were 133 cable system companies that had registered with the GIO. However, the qualified sample of this study consists of 96 cable system companies. In other words, 37 system companies had merged or gone out of business but had not reported to the GIO before this study was conducted.

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<sup>2</sup>At the end of 1999, there were reportedly 6.53 million households in Taiwan (<http://www.ris.gov.tw>) but approximately 15% of them were considered to be empty households. Thus, the accurate figure of households in 1999 in Taiwan would be about 5.6 million.

<sup>3</sup>The number was estimated by Max C. Lin, marketing manager of Filmate International Inc. Filmate is the largest cable channel distribution agent in Taiwan. Most cable system operators commonly perceive the percentage as the actual cable-pirated rate of Taiwan. In fact, pirating has been an issue of concern to both the government and the industry. Pirating occurred from the beginning of illegal operation of the cable operators in the late 1970s and became more complicated during the period of mergers and acquisitions of cable systems in the 1990s. Even though cable operators have been making attempts to stop the pirating phenomenon, it is not a simple problem and is growing more complex over time.

### Ownership Concentration of Cable Systems

The largest cable system company served 178,000 subscribers or 5.6% of total households; the second largest served 102,500 subscribers; the third largest served 95,000 subscribers; and the fourth largest served 79,500 subscribers. Thus, the four largest systems served 455,000 subscribers, resulting in a CR4 of 14.2%. The eight largest systems served 760,500 subscribers, resulting in a CR8 of 23.7% (see Table 1).

Meanwhile, the largest MSO owned 28 system companies reaching 1.1 million subscribers in Taiwan, the second largest owned 23 system companies reaching 1.06 million subscribers, the third largest owned 3 system companies and reached 176,000 subscribers, and the fourth largest owned 5 system companies reaching 54,400 subscribers. Among all 96 system companies, 3 cable system companies were invested in by both of the largest two MSOs. Overall, the four MSOs controlled 56 system companies (58%) of the total 96 cable system companies, reaching 2.38 million subscribers (74.3% of total cable homes).

According to guidelines determined by the Justice Department of the U.S., a market is considered concentrated if the CR4 is higher than 35% (Chan-Olmsted & Litman, 1988; Atkin, 1994). This study concludes that the chain CR4 of the cable system market is 74.3%, which implies that Taiwan's cable system market is highly concentrated and predominantly controlled in the hands of the four cable

TABLE 1  
Ownership Concentration of Taiwan's Cable System Market (1999)

<i>Variables</i>	<i>Subscribers</i>	<i>Market Share</i>
<b>Systems</b>		
Total systems (96)	3.21 million	
Largest system	178,000	5.6%
Second largest	102,500	3.2%
Third largest	95,000	3.0%
Fourth largest	79,500	2.5%
Top four system	455,000 (CR4 = 14.2%)	
Top eight systems	760,500 (CR8 = 23.7%)	
<b>MSOs</b>		
Total MSOs (4)	2.38 million	
Largest MSO	1.10 million	34.2%
Second largest	1.06 million	32.9%
Third largest	176,000	5.5%
Fourth largest	54,400	1.7%
Top four MSOs (56 systems)	2.38 million (CR4 = 74.3%)	

*Note.* CR = concentration ratios; MSOs = multiple system operators.

television conglomerates. Because Taiwan's cable system market is divided into 51 independent franchise areas, the CR4 and the CR8 of the cable system market are less meaningful for analysis of ownership concentration of Taiwan's cable system market as a whole.

### Ownership Concentration of Cable Channels

As of October 1999, there were 66 companies operating 109 GIO registered cable channels. However, the qualified sample of this study consists of 52 companies operating 87 cable channels. In other words, 14 channel companies had merged or gone out of business and had not reported to the GIO, or had existed less than 1 year without annual revenue to report before this study was conducted.

As for total revenue of Taiwan's cable channel market in 1998, this study could not compute it by using data provided because not all surveyed cable companies were willing to release their revenue figures. However, market analysts and researchers contributed figures and formulas for calculating channel market revenue. Rainmaker (1999), a market survey company focusing on electronic media industries, reported that the total revenue of Taiwan's cable channels in 1998 reached \$12.7 billion New Taiwan dollars (NT\$), approximately equivalent to US\$416.3 million.<sup>4</sup> In addition, a study conducted to estimate total revenue of Taiwan's broadcasting and film industries concluded that the advertising income of cable channel companies equaled approximately 74% of revenue yielded by the whole cable channel market in 1998 (Peng & Wang, 1997). As a result, this study computed the total revenue of Taiwan's cable channel market at US\$562.6 million.

As indicated in Table 2, there were 52 channel companies in 1999, operating 87 cable channels with total revenue of US\$562.6 million in 1998. As indicated in Table 2, the largest company operated 5 channels with revenue of US\$142.1 million, followed by the second largest, which operated 3 channels with revenue of US\$69.2 million. Moreover, the third largest operated 5 channels with revenue of US\$68.9 million, followed by the fourth largest company, which operated 7 channels with revenue of US\$49.8 million.

Overall, the four largest channel companies operated a total of 20 channels with revenue of US\$330 million, and the CR4 was 58.7%. The eight largest companies operated 36 channels with revenue of US\$429.9 million, and the CR8 was 76.4%. Taiwan's cable channel market is highly concentrated as estimated by both CR4 and CR8 ratio.

Moreover, the largest cable channel chain, owning the largest channel company, operated 5 channels with revenue of US\$142.1 million, followed by the second largest chain, which owned channel companies operating 6 channels with

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<sup>4</sup>This study used an exchange rate between U.S. dollars and New Taiwan dollars at US\$1=NT\$30.5.

TABLE 2  
Ownership Concentration of Taiwan's Cable Channel Market (1999)

<i>Channel Companies</i>	<i>No. of Channels</i>	<i>Revenue in 1998</i>	<i>Market Share</i>
Total companies (52)	87	US\$562.6 million (NT\$17.16 billion)	
Largest company	5	US\$142.1 million (NT\$4.33 billion)	25.3%
Second largest	3	US\$69.2 million (NT\$2.11 billion)	12.3%
Third largest	5	US\$68.9 million (NT\$2.10 billion)	12.2%
Fourth largest	7	US\$49.8 million (NT\$1.52 billion)	8.9%
Top four companies	20	US\$330 million (NT\$10.06 billion), CR4 = 58.7%	
Top eight companies	36	US\$429.9 million (NT\$13.11 billion), CR8 = 76.4%	
Largest chain	5	US\$142.1 million (NT\$4.33 billion)	25.3%
Second largest	6	US\$86.2 million (NT\$2.63 billion)	15.3%
Third largest	3	US\$69.2 million (NT\$2.11 billion)	12.3%
Fourth largest	7	US\$49.8 million (NT\$1.52 billion)	8.9%
Top four chains	21	US\$340.3 million (NT\$10.38 billion), CR4 = 61.8%	
Top eight chains	35	US\$453.3 million (NT\$13.83 billion), CR8 = 80.6%	

*Note.* NT = New Taiwan dollar; CR = concentration ratios.

revenue of US\$86.2 million. The third largest chain owned channel companies operating 3 channels with revenue of US\$69.2 million, followed by the fourth largest chain, which owned channel companies operating 7 channels with revenue of US\$49.8 million.

In sum, the four largest cable channel chains owned channel companies operating 21 channels with revenue of US\$347.2 million and a CR4 of 61.8%; the eight largest cable channel chains owned channel companies operating 35 channels with revenue of US\$453.3 million and a CR8 of 80.6%. Adhering to the standard of the U.S. Justice Department, this study confirms that Taiwan's cable channel market is also highly concentrated, with control predominantly in the hands of major cable channel chains as estimated by both CR4 and CR8 ratios.

## CONCLUSION

Bagdikian (1992) stated that 50 corporations controlled most of the major media in the United States in 1983, and that the figure had fallen to less than 20 in 1992. Furthermore, in a subsequent study, Bagdikian (2000) concluded that the U.S. media industry continues to experience further consolidation. As for cable television, Chan-Olmsted (1996) confirmed that the U.S. cable industry is approaching a strong oligopolistic market. This study concludes that, comparable to the U.S. ca-

ble industry, Taiwan's cable industry has also become more oligopolistic, centralized under the control of a small number of media conglomerates.

In 1999, the CR of the four largest cable system conglomerates (chain CR4) was 74.3%, meaning that Taiwan's cable system was highly concentrated and tightly controlled by a few media conglomerates. As for Taiwan's cable channel market, the CR of the four largest firms (CR4) was 58.7% and the CR8 was 76.4%. Additionally, the CR of the four largest cable channel conglomerates (chain CR4) was 61.8%, and the chain CR8 was 80.6%. Similar to the U.S. cable market, Taiwan's cable channel market was also tightly concentrated in the hands of fewer cable conglomerates.

Engaging in a similar strategy exercised by Tele-Communications Inc. in the U.S. cable market of acquiring interests in cable channels that provide programming for cable systems (Picard, 1996), the two largest MSOs of Taiwan, UCG and EMG, vertically integrated the cable market by investing in cable channel companies. According to the findings of this study, UCG owns 28 cable system companies and channel companies operating 6 cable channels, representing the largest MSO and the second largest cable channel chain in Taiwan. EMG owns 23 cable system companies and cable channel companies operating 7 cable channels, making it the second largest MSO and the fourth largest cable channel chain. Perceivably, ownership of Taiwan's cable industry will be more concentrated in a few media chains when they integrate both horizontally and vertically more cable systems and cable channels.

In addition to the cable industry, UCG and EMG have similar interests in investing in other media markets. UCG owns 13 communications-related firms such as advertising, marketing, public relations, and publication services, whereas EMG owns 7 such firms, including advertising, marketing, radio stations, newspapers, magazines, and direct satellite services (Chen, 1999). In recent years, two conglomerates have eagerly aimed at the broadband service market. Currently, both UCG and EMG own Internet service companies. Besides this, both conglomerates began their new wire-telephone services in 2001 because the Taiwanese government granted licenses in March 1999 allowing them to offer potentially lucrative fixed-network telecommunications services. Apparently, this is a tendency toward convergence for Taiwan's media conglomerates by promoting cable television, Internet connection, and wire-telephone services to households via one single broadband connection.

Based on this study, Taiwan's communications industries will predictably be increasingly concentrated in the hands of a few media conglomerates like UCG and EMG. Even though the market data concerning communications industries are rather difficult to collect in Taiwan, this study suggests that communications researchers need to pay more attention to concentration of media across various communications industries and further studies on cross-industry concentration in the communications industries.

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