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Concentration Levels in the U.S. Advertising and Marketing Services Industry: Myth vs. Reality

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Working Paper

09-044

CONCENTRATION LEVELS IN THE U.S. ADVERTISING AND MARKETING SERVICES INDUSTRY: MYTH vs. REALITY*

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September 24, 2008

*Support of the Division of Research, Harvard Business School and Pleicides Consulting Group Inc. is gratefully acknowledged. We thank James C. Davis for helpful comments on an earlier draft.

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ABSTRACT

This paper analyzes changes in concentration levels in the U.S. Advertising and Marketing Services (A&MS) industry using publicly released data that have been largely ignored in past discussions of the industrial organization of this industry, namely those available from the U.S. Census Bureau's quinquennial Economic Census and the Service Annual Survey. We define the A&MS industry in terms of nine sectors, each of which is represented by a separate 5 digit NAICS category. In so doing, we have sought to redress some of the measurement problems surrounding estimates found in the existing literature. Our main findings are threefold.

First, in the case of the core and largest sector, Advertising Agencies, firm level concentration as measured by Herfindahl-Hirschman Index (HHI) increased slightly but remained relatively low from 1977 to 2002. All of the HHI estimates readily satisfied the standard widely used to characterize an industry as "unconcentrated." We find mixed support for the hypotheses that the ranks of mid-sized agencies were depleted by ongoing waves of mergers and acquisitions and resulted in a polarized size structure. The size distributions of agency revenue have become more polarized in the sense that over time they appear more skewed, more dispersed, and exhibit greater inequality. The share of total receipts realized by small agencies fell while that of large agencies rose. However, the position of mid-sized agencies appears to have changed little over the period 1977-2002, as measured by the shares of agencies and receipts they represent.

Second, concentration levels in 1997 and 2002 varied across the nine sectors comprising the A&MS industry, but all were within the range generally considered as indicative of a competitive industry.

Third, we developed concentration ratios at the level of holding companies (HC's) and find that the four largest HC's captured between a fifth and a quarter of total revenue from the A&MS industry, a share that remained quite stable over the period, 2002-2006. These estimates are lower by an order of magnitude than estimates often cited in the trade press. Reasons for the discrepancy are discussed.

CONCENTRATION LEVELS IN THE U.S. ADVERTISING AND MARKETING SERVICES INDUSTRY: MYTH vs. REALITY

1.0 INTRODUCTION

How concentrated is the U.S. advertising and marketing services industry? Over the past several decades, the effects of de-regulation, globalization, and technological innovation have re-shaped the advertising and marketing services industry (hereafter A&MS) as they worked their way through the economy. Clients have demanded more accountability and integration for an ever-increasing range of services (Duboff 2007 and Escobar 2005). The supply side of this industry has grown through entry of new firms, diversification of established ones, and especially through the aggressive growth of global holding companies that have undertaken hundreds of mergers and acquisitions (Silk and Berndt 2004). Domestically, the advertising agency business, the core sector of the A&MS industry, has become more geographically dispersed over the last half century, spreading west and south from its original base in the corridor running from New York through Philadelphia to Chicago (King, Silk, and Kettelhohn 2003). As well, there have been important changes in certain longstanding industry practices, such as the unbundling of advertising agency services (Horsky 2006; Arzaghi, Berndt, Davis, and Silk 2008), and diminished reliance on the traditional method of agency compensation derived from media commissions in favor of a fee-for-service system based on labor charges (Beals 2007). To what extent have these developments affected the size-structure of the A&MS industry in the U.S.?

Industry observers express divergent views about the effect of mergers and acquisitions on the size-structure of the A&MS industry. One perspective maintains that acquisitions have depleted the ranks of mid-sized agencies and resulted in a polarized size-structure consisting of very large and very small firms (Kanner 1979, Levin 1991, Sorrell 1997). An alternative viewpoint stresses the rejuvenation of the size-structure and argues that mid-size agencies possess advantages with respect to creativity and responsiveness to client service demands that fosters their viability and provides opportunities for growth (Lander 1990, Crawford 1995).

Estimates from the existing literature are typically based on data from trade sources and present a picture that emphasizes rising concentration over time and domination by a handful of holding companies. These estimates are suspect as they suffer from a number of conceptual and measurement limitations. First, there is the matter of defining the boundaries of the "advertising and marketing services" industry and determining the size of this market. Whereas the scope of services offered by suppliers has expanded considerably with the availability of new communications technologies and related diversification by suppliers, estimates often focus on the set of services provided by traditional "full service" advertising agencies that are related to "measured" advertising media. Moreover, to measure market size, reliance is often placed on the total revenue of the 25, 50, 100, and 500 largest firms, ignoring the revenues earned by large numbers of smaller firms (Bloom 2005, Dooner 2002).

Second, the choice of a measure of size is problematical. Although "gross income" has long been recognized as the preferred measure of advertising agency size (Paster 1981) rather than the amount agencies "bill" their clients for services.

Nonetheless, billings continue to be used in many discussions of firm size and industry concentration. “Billings” represent the costs of materials and services (including media space and time) purchased on behalf of clients, plus agency compensation. Thus “billings” are akin to “sales” while “gross income” is akin to “margin,” (i.e., the difference between “sales” and “cost of goods sold” or “value-added.” When “full service” agencies were compensated by a fixed rate of commission on client billings, the latter was a meaningful indicator of agency size. However, as billings-based agency compensation was replaced by fee-based remuneration, the practice of approximating true billings by “capitalized billings” became widespread. Capitalized billings are calculated by assuming that agency compensation was equivalent to some commission rate (say 15 %) and then inferring the level of billings implied by that commission —e.g., an agency fee of $100 was equivalent to 15% commission on billings of $100/0.15 = $667. Estimates of capitalized billings are thus sensitive to the commission rate or margin assumed, which is not always made explicit and varies for different types of services. Capitalized billings do not fall within the purview of generally accepted accounting principles. Despite being the subject of industry criticism (Cardonna 2002, Katz and Lithen 2004), many discussions of firm size and industry structure continue to rely on billings data, directly (Ducoffe and Smith 1994, Kim 1995) or indirectly, such as when industry gross income is estimated as some fixed percentage of aggregate industry billings (Lancedorfer and Reece 2004).

Finally, there are good reasons for examining concentration in the advertising and communications industry at two levels: firms (or establishments) and holding companies (Von Nordenflycht 2005). At the firm level, the organization of the full-service advertising agency sector has historically possessed a highly diverse and unconcentrated size structure.[1] The persistence of this organization reflects the basic economic characteristics of a competitive industry, namely ease of entry and exit, small minimum efficient size (Silk and Berndt 1993) and cyclical demand from heterogeneous clients consisting of both national and local advertisers (Blank 1962) in geographically dispersed markets. Silk and Berndt (1994) suggest that the advertising agency business satisfies the conditions MacDonald and Slavinsky (1987) showed were required for a competitive industry to sustain an equilibrium with multiproduct firms.

The major holding companies are all global, public corporations that own or control a large portfolio of operating units that supply a broad range of communication services to clients (Silk and Berndt 2004). Holding company headquarters coordinate affiliated units and supply them with support programs and financial resources. Von Nordenflycht (2007) argues that the principal advantage that holding companies possess over independent agencies lies more in access to external capital rather than in factors relating to product-market competition, including creativity. The holding company concept was pioneered by the Interpublic Group of Companies as means of circumventing the longstanding industry norm which precludes an advertising agency from serving competing clients in the same market. To respect this requirement, holding companies are organized into separate sub-groups or “networks” of affiliated units offering more or less similar mixes of services but that operate independently of one another and that often compete with one another for client accounts. This decentralization

[1] King, Silk, and Kettelhohn (2001) report values of the Herfindahl-Hirschman Index (HHI) for employment size distributions of establishments reported by the Census Bureau at five year intervals for the period 1948-1997. In 1948, HHI was 23, rose to 36 in 1963, and then declined to 9 in 1997.The possible range of HHI varies from a minimum of approximately unity to a maximum of 10,000.

is essential in order for the claim of autonomy made by holding companies for their operating units to be credible with clients. Clients differ in how stringently competition is defined and their demands are known to have affected the initiation and outcome of mergers and acquisitions (Siman 1989).

In this paper, we investigate concentration levels in the U.S. A&MS industry using public data that previously had been largely overlooked in the academic and trade literature on this subject and that allows several of the conceptual and measure issues outlined above to be addressed. The adoption of the NAICS system of industrial classification by the Bureau of Census in 1997 made data available relating to concentration levels for several sectors of the A&MS industry that previously had been included in more aggregate categories under the SIC classification scheme that NAICS replaced. The data employed here are those available from two sources. The first is the Economic Census from which gross income, size distributions, and concentration ratios are available for 1997 and 2002 covering several NAICS categories that correspond to sectors of the A&MS industry. The second source is the “Service Annual Survey” conducted each year by the Census Bureau from which annual estimates of the gross income are reported covering a number of relevant NAICS categories over the period 1997-2006. Using data from the Service Annual Survey in conjunction with information on the gross income of holding companies reported in *Advertising Age*, we construct annual estimates of concentration ratios for the largest holding companies operating in the U.S.A&MS industry.

Our major findings are threefold. First, in the case of the core and largest sector, Advertising Agencies, firm level concentration as measured by Herfindahl-Hirschman

Index (HHI) increased slightly but remained relatively low from 1977 to 2002. All of the HHI estimates readily satisfy the standard widely use to characterize an industry as “unconcentrated.” We find mixed support for the hypotheses that the ranks of mid-sized agencies were depleted by ongoing waves of mergers and acquisitions and resulted in a polarized size structure. Second, concentration levels in 1997 and 2002 varied across the nine sectors comprising the A&MS industry, but all were within the range generally considered as indicative of a competitive industry. Third, we find that the four largest holding companies captured between a fifth and a quarter of total revenue from the A&MS industry, a share that remained quite stable over the period, 2002-2006. These estimates are lower by an order of magnitude than estimates often cited in the trade press.

The remainder of the paper is organized as follows. Section 2 discusses changes in concentration in the advertising agency sector for which comparable data are available over the period, 1977-2002. Section 3 compares concentration levels in several additional sectors of the A&MS industry for 1997 and 2002. Section 4 presents new estimates of concentration ratios for the largest holding companies operating in the U.S. A&MS industry for the period, 2002-2006. Section 5 discusses the results and Section 6 summarizes our conclusions.

2.0 CONCENTRATION IN THE ADVERTISING AGENCY BUSINESS

The advertising agency business is the core sector of the A&MS industry. Advertising agencies, NAICS category 54181, are “primarily engaged creating advertising campaigns and placing such advertising in…media” and “provide a full-range of services (i.e., through in-house capabilities or subcontracting), including providing advice, creative services, account management, production of advertising material, media planning, and buying."[2] The definition of NAICS 54181 is consistent with that of category 7311 under the SIC classification system which the Census followed prior to 1997 and thus we can compare the advertising agency size-structure across the Censuses conducted from 1977 to 2002.

2.1 Demand for Advertising Agency Services

By way of background, Figure 1 shows the year to-year percentage changes in total U.S. advertising expenditures (national plus local advertising) from 1970 to 2006. Over this 37 year period, the *median* annual percentage change in current dollars was 7.5 percent, ranging from a maximum of 19.4 in 1976 to a minimum of -6.5 in 2001 As is well-known (Blank 1962), demand for advertising is cyclical and the peaks and troughs indicated in Figure 1 coincide with those established by the National Bureau of Economic Research (2008) in dating business cycles occurring in the U.S. economy. Also plotted in Figure 1 are estimates of the annual changes in real terms, calculated by deflating current dollars of total U.S. advertising expenditures by the "cost per thousand" (CPM) composite media price index for national and local advertising budgets prepared by Universal-McCann. Real growth rates are much smaller than nominal ones, the *median* percentage change being 2.0, varying from a maximum of 7.1 percent in 1983 to a minimum of -5.2 in 2001.

Figure 2 compares the compound annual growth rates over the five years that lapsed between each of the censuses conducted from 1977 to 2002 for the aforementioned CPM media price index with the Producer Price Index (PPI) and the

[2] U.S. Census Bureau, "Establishment and Firm Size," 1997 Economic Census, Professional, Scientific, and Technical Services, Subject Series, October 2000, Appendix B, p. B10.

Gross Domestic Product Implicit Price Deflator (GDPIPD).The compound annual growth rate in advertising media prices exceeded that for both PPI and GDPIPD in the five year periods that lapsed between each of the six censuses conducted from 1977 to 2002. Thus, it is clear that most of the nominal growth in total U.S. advertising expenditures is accounted for by increases in advertising media prices.

INSERT FIGURES 1 AND 2 HERE

In Table 1, several indicators of the demand for advertising agency services are summarized for the censuses conducted from 1977 to 2002. Over the latter period, both the number of firms and establishments increased at compound annual grow rates of 2-4 percent. However, in 1997 the long-term growth ended and the number of firms and establishments decreased from their 1992 levels. This decline continued in 2002. At the same time, the ratio of total numbers of firms to establishments steadily increased from 1.06 in 1977 to 1.13 in 2002, indicating growth in the incidence of multi-establishment firms.

INSERT TABLE 1 HERE

Table 1 also shows the levels of total advertising agency receipts (i.e., gross income) and total U.S. advertising expenditures in both current and constant dollars for the six census years, where both series were deflated, as before, by the Universal McCann composite media cost index. Note that agency receipts as a percentage of total advertising expenditures increased from 8.5 per cent in 1977 to a peak of just under 10 per cent in 1992 and then declined to 8.8 per cent in 1997 and to 8.7 per cent in 2002. This post-1992 drop in the share of total advertising expenditures represented by agency income coincides with the changes in the methods of agency compensation identified by tracking studies conducted regularly at two year intervals by the Association of National Advertisers (ANA) among its membership of large U.S. national advertisers (Beals 2007).[3] The ANA data reveal a long-term trend toward the abandonment of agency compensation related to media commissions and the adoption of arrangements based on labor fees—a shift that was particularly pronounced between 1994 and 2003.

To examine these developments further, we calculated the nominal and real compound annual growth rates of agency income and advertising expenditures for the five year periods between each pair of censuses and present those rates in Figure 3. Not surprisingly, the nominal and real growth rates of agency income tend to be similar to those of advertising expenditures, with the growth rates experienced from 1977 to 1982 and from 1982 to 1987 exceeding those in later periods. Moreover as shown in Figure 3, in each of the three pre-1992 periods, the growth rate of agency income exceeded that of total advertising expenditures. In both the post 1992 periods, the order reversed, and the growth rates of total advertising outlays were greater than those for agency income. This same pattern obtained with respect to nominal as well as real growth rates.

INSERT FIGURE 3 HERE

2.2 Concentration Levels: 1977-2002

Detailed revenue size distributions published by the Census Bureau for 1977-2002 permit the calculation of Herfindahl-Hirschman Indices (HHI) at the level of both firms and establishments using the MINL method recommended by Schmalensee (1977). Table

[3] Further evidence of changes in agency compensation methods over time from Census data covering the full-service advertising agency sector as a whole is summarized in Arzaghi et al.(2008).

2 shows the values of HHI, which may range in value from a minimum of approximately unity ((1/n) 10^4 where n is the number of firms or establishments) to a maximum of 10,000. In the case of establishments, the values of HHI remained small over the entire period studied and exhibited no apparent trend. The values of HHI ranged from a maximum of 16 in 1982, to a minimum of 10 in 2002. For firms, the values of HHI are somewhat greater than those for establishments but remained stable at a level of 80- 90 over the period 1977-1992. They then increased to 140 in 1997 and rose again in 2002 to 194. All these values of HHI are well below the threshold level of HHI = 1,000 used by the Department of Justice and the Federal Trade Commission to distinguish between "unconcentrated" and "moderately concentrated" industries.[4]

INSERT TABLE 2 HERE

Further evidence of this increase in firm-level concentration is found in published data on concentration ratios available for the 1987 and subsequent censuses and summarized in Table 2. The shares of total advertising agency income accounted for by the four, eight, twenty, and fifty largest firms measured by their concentration ratios (CR4, CR8, CR20, and CR50) in 1992 were similar to those for 1987 but then increased noticeably in 1997 and again in 2002. By 2002, the values of CR4 and CR8 (34 and 41 per cent, respectively) were approximately double their 1992 levels (14 and 22 percent, respectively). CR20 and CR50 also increased over time but to a lesser degree than for CR4 and CR8, indicating that the rise in concentration occurred primarily among the largest firms in the advertising agency sector.

[4] See: U.S. Department of Justice and the Federal Trade Commission, "Horizontal Merger Guidelines," Revised April 8, 1997, especially Section 1.5. Accessed at: http://www.usdoj.gov.

2.3 The Polarization Hypothesis

To address the question of whether the size structure of the advertising agency sector has become more polarized over time, we conducted several analyses to detect how the grouped firm-level size distributions of advertising agency revenue reported by the Census have changed over the period 1977-2002. First, consider the coefficient of variation (CV, ratio of standard deviation to mean) that represents a measure of dispersion of the distribution of agency revenues independent of price changes affecting agency income. As may be seen in Table 2, the values of CV steadily crept upward from 7.4 in 1977 to 8.8 in 1992 and then rose more rapidly to 10.4 in 1997 and to 11.5 in 2002. Over time then, the distribution of firm-level revenue in the advertising agency sector has become more dispersed.

Second, Gini coefficients were calculated for the grouped firm size distributions of advertising agency revenues using the method described by Menderhausen (1946). The Gini coefficient (GC) provides a measure of statistical dispersion typically used to measure inequality of income or wealth distributions (Cowell 1977). In the present context, GC serves as a measure of the inequality of the distribution of agency revenues across the population of agencies. GC takes on a value of zero if revenue is distributed equally across the entire population and unity for complete inequality (i.e., when n-1 agencies have no revenue and the nth agency accounts for all of the industry’s revenue). Referring to Table 2, we observe that GC was essentially unchanged at a value just under .8 from 1977 to 1992 and then exceeded the .8 level in 1997 and 2002. Thus, it appears that the degree of inequality in the distribution of agency revenue across agencies remained stable over the fifteen year period 1977-1992 but in the ensuing decade there has been a modest shift in the direction of somewhat greater inequality.

Finally, we examined the size distributions of firms for evidence of polarization using the definition of "mid-sized" agencies suggested by the American Association of Advertising Agencies (AAAA) as being those with 1995 gross income of $20 million to $100 million (Gleason 1995). We converted this range of agency gross income from 1995 dollars to current dollars for 1977 to 2002 using the GDP Implicit Price Deflator and then identified the Census categories of agency (firm) receipts that most closely approximated the mid-size range.[5] Column (1) of Table 3 shows the range of agency receipts in current dollars that encompasses mid-sized agencies based on the AAAA's definition and Column (2) shows the set of related Census size categories for each of the six censuses conducted from 1977 to 2002. The entries in Column (3) are the share of all agencies and the share of total agency receipts accounted for by the sub-group of agencies that fell into the size categories identified in Column (2). Agencies with receipts greater (less) than those covered by the mid-size categories were labeled "large" ("small") agencies and the shares of agencies and receipts for each are given in Columns (4) and (5), respectively.

The Census size distributions of agency revenue are highly skewed and over time the degree of skewness increased. The mid-size range of $20-$100 million exceeds the mean of the overall distribution for each of the six censuses; that quantity having grown from approximately $1 million in 1977 to $2 million in 2002, expressed in constant 1995 dollars. The mapping of the AAAA mid-size range into the Census size-categories is

[5] The analysis was also carried out using the Universal McCann media cost index shown in Table 1 rather than the GDP Implicit Price Deflator to convert current dollars of agency revenue to constant 1995 dollars. The alternative deflator did not change the mapping of Census categories into the $20 million to $100 million range of revenues used to define mid-size agencies.

imperfect in that the $20-$100 million range encompasses two of the three largest Census revenue size categories. The match for 1977 is quite close but for 1982-1992, the AAAA range falls well within the selected Census size categories and hence the Census data will overstate the mid-size agencies' shares of agencies and receipts. In the cases of both 1997 and 2002, the lower bound of the relevant Census category ($10 million) lies *below* the lower bound of the AAAA mid-sized range ($20.7 million for 1997 and $22.6 million for 2002) and the upper bound of the Census category ($99.9 million) also falls *below* the upper bound of the AAAA mid-sized range ($103.6 million for 1997 and $113.l million for 2002). However, the differences are not of great magnitude. Furthermore, expanding the set of Census categories further was infeasible inasmuch as doing so would encompass the only remaining larger Census size category, which is open-ended and consists of agencies with revenue of $100 million or more.

Examining the data in Column (3) for indications of shrinkage in the importance of mid-sized agencies, we find that the estimated shares of agencies that are mid-sized steadily increased from a quarter of a percent in 1977 to almost 2 percent in 2002. The estimates of mid-sized agencies' share of receipts appear volatile, varying from 14 to 18 percent but exhibit no discernible trend over time. The results for "larger" agencies indicate while they remained a very small share of all agencies (varying from one to two tenths of one percent) throughout the 1977-2002 period, the share of receipts they accounted for tended to increase over time, albeit unevenly. It bears noting that the share of total receipts captured by large agencies increased steadily after 1992, growing from 27 percent in that year to 35 percent in 1997 and reaching 46 percent in 2002. This latter trend is in line with that indicated by the twenty firm concentration ratios reported in Table 2 and discussed in Section 2.2.

The estimates presented in Column (5) of Table 3 reveal changes in the shares of small agencies that are the mirror image of those that occurred for large agencies. Although the share of agencies that were classified as “small” declined only slightly from 99.6 percent in 1977 to 98 percent in 2002, the share of receipts they realized fell from 60 percent in 1977 to around 55-57 percent in 1982-1992, and then further declined to 47 percent in 1997 and to 39 percent in 2002.

Overall then, it appears that the position of mid-sized agencies has remained relatively unchanged over the 25 year period from 1977 to 2002. However, large agencies gained share at the expense of small agencies. The size distributions of agency revenue have become more polarized in the sense that over time they appear more skewed, more dispersed, and exhibit greater inequality, as may be seen from the summary statistics presented in Table A1 of the Appendix. The analysis shown in Table 3 and discussed above suggests that mid-size agencies continue to be viable, although a panel study is required to cast light on the dynamics of changes in agency size with respect to patterns of growth, entry, and exit.

3.0 CONCENTRATION BY SECTOR OF THE ADVERTISING AND MARKETING SERVICES INDUSTRY

With changes in technology and buyer behavior, sellers have demanded an ever-increasing array of services to support their marketing programs and the composition and size of the A&MS industry has evolved accordingly. Following the introduction of the NAICS in the 1997 Census, data became available for several sectors of the A&MS

industry that previously had been included in aggregate SIC categories and not reported separately. These data enable us to identify nine sectors which we suggest represent a useful operational definition of the A&MS industry that corresponds to contemporary professional practice as reflected in the trade press and related literature.[6]

3.1 Sector Shares and Growth Rates

Table 4 summarizes several measures of the size (number of firms and establishments and magnitudes of receipts) and growth rates from 1997-2002 for each of the nine sectors comprising the A&MS industry. The sectors differ widely with respect to size, labor intensity, and recent growth.

INSERT TABLE 4 HERE

Total A&MS industry receipts (current $) for the nine sectors increased at a compound annual growth rate (CAGR) of 5.1 percent from 1997 to 2002, amounting to $79 billion in 2002. Advertising agencies (54181) constitute the industry's largest sector, accounting for 27 percent of total A&MS receipts in both 1997 and 2002. Although fewer agency firms and establishments operated in 2002 than in 1997, agency revenue increased by almost 5 percent annually.

The fastest growing sector was Marketing Consulting Services (541613) where revenues increased at a CAGR of 12.7 percent (while the number of firms and establishments grew at nearly 9 percent annually) and in 2002 was the industry's second

[6] See, for example, Fine et al. (2005, p. 41). In their annual reports, the major holding companies describe themselves as being in the "advertising and marketing services" industry or the "advertising and communications services" business. The industry's leading trade publication, *Advertising Age*, also uses this terminology and reports firm and industry revenues for a set of "disciplines," or competencies including traditional advertising, media services, direct marketing, sales promotion, and public relations. See, "Agency Report," *Advertising Age*, 78 (April 30, 2007), S1-16.

largest sector, accounting for 18 percent of total A&MS receipts. The third ranking sector in 1997, Other Advertising (54189) underwent a reduction in the number of firms and establishments of about 1.3-1.4 percent by 2002. Receipts also declined marginally (by less than 1 percent annually), leading to a reduction in its share of total industry revenues from 15 to 11 percent.[7] The relative positions of the other two sectors with double-digit shares of A&MS industry revenues (Direct Mail, 54186; and Marketing Research & Public Opinion Polling, 54191) remained stable, each experiencing a change in share of approximately one share point. In the case of Marketing Research & Public Opinion Polling, revenues, firms, and establishments all increased at an annual rate of approximately 7 percent. For Direct Mail, revenue increased by 4 percent annually while the number of firms and establishment each rose by about 2 percent per year.

Turning to the sectors whose shares were less than 10 percent in both 1997 and 2002, we see from Table 3 that Public Relations (54182) maintained an 8 percent share with revenues growing by almost 5 per cent annually while the number of firms and establishments was increasing by about 1 per cent. For the Display sector (54185, includes outdoor, mall, in-store, transit, and poster advertising), the number of firms and establishments increased annually by about 2 percent, respectively, but receipts remained essentially unchanged. This sector's share of A&MS revenues fell from 7.5 to 5.8 percent. Revenues of the Advertising Materials Distribution sector (54187, includes circulars, coupons, and samples) almost doubled in size between 1997 and 2002 (with the number of firms and establishments growing by approximately 3 percent) and its share of

[7] The "Other Advertising Services" sector includes designing and coordinating the production of specialty items (such as key chains, mouse pads, and coffee mugs), public product demonstrations, welcoming services, retail store and trade show signage.

industry revenues increased from 1.3 to 1.9 percent. Finally, revenue for Media Buying services (54183, includes media planning and buying) grew by almost 2 percent while the number of firms and establishments remained essentially unchanged, as did its share of A&MS total revenue (1.7 and 1.5 per cent in 1997 and 2002, respectively).

3.2 A&MS Sector Concentration Levels

Table 5 presents two measures of concentration levels in each of the nine A&MS sectors for 1997 and 2002: (a) Herfindahl-Hirshman Indices (HHI) for both firms and establishments, and (b) firm concentration ratios (CR4, CR8, CR20, and CR50). For several sectors, receipts data were withheld for two or more sub-categories of the size distribution to prevent disclosure of confidential data. As may be seen from Table 5, this resulted in the availability of only 6 of 18 possible firm-level HHI's (9 sectors x 2 Census years) while for the establishment-level size distributions, 12 of 18 possible HHI's are available. Examining this sparse set of HHI's, we observe that the values are all quite small. The six firm-level HHI's are all less than 200 and the twelve establishment-level HHI's are all less than 23, except for Media Buying which was 111 in 1997. Here again, all the values in this incomplete set of HHI's are indicative of "unconcentrated" markets as defined by the Department of Justice/Federal Trade Commission standard noted earlier.

INSERT TABLE 5 HERE

Turning to the firm concentration ratios that are available for all 9 sectors from both the 1997 and 2002 censuses, we find that the concentration levels vary widely across sectors and between Censuses within sectors. To facilitate comparisons, we also include the HHI's and CR's for Advertising Agencies (54181) in Table 4 that were presented in Table 3 and discussed above. Beginning with the two sectors that had the highest concentration levels in 1997 (CR20 > 60 percent), we observe from Table 5 that in 2002 concentration increased in Advertising Materials Distribution (54187) but decreased in Display Advertising (54185). All four CR's for Advertising Materials Distribution rose in 2002, with CR8 and CR50 reaching 51.5 and 82.1 percent, respectively. Receipts for this relatively small sector grew markedly from $830 million in 1997 to $1,488 million in 2002 while the number of firms and establishments increased at a lesser rate, from 488 to 552 firms and from 560 to 646 establishments. In contrast, concentration levels for Display Advertising Services, also a relatively small sector, decreased slightly in 2002 (CR8 falling from 56.2 to 52.5 percent and CR50 falling from 74.8 to 70.1 percent) as a result of revenues remaining level while the number of firms and establishments increased moderately (from 1,920 to 2,088 firms and from 2,261 to 2,526 establishments). Media Buying Services (54183), the smallest of the nine sectors with respect to revenues (approximately $1 billion in both 1997 and 2002), also experienced a slight rise in concentration at all four CR levels.

Concentration levels tend to be low in the other five sectors comprising the A&MS industry. Among these five sectors, CR4 and CR50 range from a high of 23.2 and 54.4 percent, respectively for Marketing Research and Polling (54191) to a low of 5.3 and 19.1 percent, respectively for Marketing Consulting Services (541613) Interestingly, the latter sector is the one where revenues as well as the number of firms and establishments grew most rapidly between 1997 and 2002.[8] Revenues for Marketing Consulting Services increased at a compound annual growth rate of 13 percent while the CAGR for both the number of firms and establishments grew by 11 percent. Low levels of concentration persisted in the other three sectors: CR4 and CR50 remained around 17 percent and 33 percent, respectively for Public Relations (54182); 19 and 43 per cent, respectively for Direct Mail (54186); and 8 and 29 percent, respectively for Other Advertising Services (54189).

4.0 HOLDING COMPANIES' SHARE OF U.S. ADVERTISING AND MARKETING SERVICES INDUSTRY REVENUE

In this section, we present *annual e*stimates of the share of the total U.S. A&MS revenue accounted for by the domestic operations of the four and eight largest holding companies (hereafter, HC) for the five year period 2002 – 2006. The source of estimates for the total size of A&MS revenues are published annual data from the "Service Annual Survey" (hereafter, SAS) on revenues for eight of the nine sectors discussed in Section 3.0 as comprising the A&MS industry.[9] Unfortunately for the purposes at hand, SAS reports do not break out data for Marketing Consulting Services (NAICS 541613) separately and thus estimates of A&MS revenues exclude this sector but do encompass the remaining eight sectors. SAS periodically updates its estimates using the results from the latest Economic Census available and the annual estimates used here reflect adjustment made from the 2002 Census in the series for 2002 – 2006.

[8] Honomichl (2008) publishes annual estimates of the U.S. marketing research revenues based on data collected for 150-200 suppliers of marketing research services. The sample includes the 50 largest U.S. research firms that account for more than 90 percent of the total sample's revenues. Honomichl's estimates for 1997 and 2002 are in close accord with the 50 firm concentration ratio for NAICS 54191 reported for the 1997 and 2002 Censuses and shown in Table 5.

[9] SAS estimates are based on a mail questionnaire survey conducted among a probability sample of firms located in the U.S. and having paid employees. The series employed here are for "taxable employer firms." For further details, see: *Service Annual Survey 2006*, Current Business Reports, Issued January 2008, U. S. Census Bureau, accessed at http://www.census.gov/svsd/www/services/sas/sas-data/sashist.htm.

Annual estimates of the revenues (gross income) arising from U.S. operations of the four and eight largest HCs are those collected by *Advertising Age* from the firms and public documents and reported in their annual "Agency Report."[10] As a result of passage of the Sarbanes-Oxley Act in July, 2002, firms became more restrictive in releasing financial data, and *Advertising Age* was forced to modify its methodology, among other things changing the reporting of HC revenue from a *pro forma* basis to one following generally accepted accounting principles (Endicott 2003). These changes resulted in a discontinuity in the historical time series on HC revenues that *Advertising Age* had been reporting, and thus comparable data are available only from 2002 onward.

Table 6 presents the SAS-based estimates of the total revenue (current $) for eight sectors of the U.S. A&MS industry along with the four and eight firm HC concentration ratios (HCCR4 and HCCR8, respectively) for the period 2002 through 2006. The latter were computed by dividing the gross income (current $) of the four and eight largest HCs (as reported by *Advertising Age*) by the SAS estimate of total industry revenue shown in column (1) of Table 6. As may be seen from column (3), the share of the four largest HCs grew slightly over the 6 year period; from 18 percent in 2002 to almost 20 percent in 2006, as did the eight firm shares (increasing from 20 percent in 2002 to 22 percent in 2006). The shares for the eight largest HCs in column (3) are only slightly larger than the four firm shares, a reflection of the highly skewed distribution of holding company size.

INSERT TABLE 6 HERE

[10] See, for example, "Agency Report," *Advertising Age*, 74 (April 21, 2003), especially, "World's Top 25 Ad Organizations," p. S4.

To check the sensitivity of the concentration ratios to the selection of the sectors included in the definition of the A&MS industry, we calculated the concentration ratios using estimates of total industry revenue for six rather than eight sectors. The two sectors set aside were “Advertising Materials Distribution” (54187) and “Other Advertising Services” (54189) and are elements of what is labeled in the industry as the “consumer and trade promotion discipline.” These sectors were selected for removal on grounds that the involvement of HCs in those services was variable and/or limited. The six sector size estimates are shown in column (5) of Table 6 and concentration ratios appear in columns (7) and (8). Dropping these two sectors reduces estimates of the total A&MS industry revenue by approximately 15 percent and thus the concentration ratios for the six sector industry definition are higher than those based on eight sectors. The differences are however, only of the order of 4 share (percentage) points for either CR4 or CR8 in any year. Even under this narrower definition of the A&MS industry, the four largest HCs account for less than a quarter of total industry revenue while the share of eight largest HCs is only slightly larger. These estimates could be viewed conservative in the sense that were annual revenues for the Marketing Consulting (541613) sector included, estimates of total A&MS revenues would be noticeably greater and the concentration ratios would decline accordingly.

To gain further perspective on the estimates of CR4 and CR8 for HCs discussed above, we performed some additional analysis to address the following question: If the four (or eight) largest firms in *each* of eight sectors comprising the A&MS industry were *all* owned by HCs, what would be the value of HCCR4 and HCCR8?[11] Those quantities

[11] We thank Jim Davis for this suggestion.

provide an *upper bound* on the CR4 and CR8 for HCs in the sense that the revenues used in the numerator of this calculation represents the *maximum possible revenue* that four (or eight) HCs could capture, given the concentration levels that exist in each of the sectors and which are shown in Table 5. Empirically, we expect these *maximum possible revenues* to exceed the reported revenues for the four (and eight) largest HCs (as given in *Advertising Age*) to the extent that HC ownership of the largest firms varies across sectors. Such variation does obtain. For example, in 2002 the four largest and the eight largest firms in both the full service advertising agency sector and the media buying sector were all owned by HCs.[12] However, in the marketing research sector, none of the four largest firms and only one of the eight largest firms were affiliated with HCs.[13]

For 2002, *maximum values* of HCCR4 and HCCR8 were obtained by dividing the aforementioned *maximum possible revenues* realizable by the four and eight largest HCs by the sum of the receipts realized by all firms in all eight (six) sectors in 2002 (Table 6). Performing those calculations for the aforementioned eight sector definition of the A&MS industry, we obtain estimates of 25.5 and 32.2 for the upper bounds on HCCR4 and HCCR8, respectively. As expected, both of these values exceed the relevant comparable estimates of 17.6 and 20.4 Table 6), respectively, by approximately fifty percent. Similarly, under the six sector definition of the A&MS industry, we obtain values of 27.9 and 35.0, for the upper bounds on HCCR4 and HCCR8, respectively, both of which also exceed the corresponding estimates of 20.9 and 24.3 (Table 6) by a third or more. The substantial differences between the estimates of the upper bounds and the prevailing values of HCCR4 and HCCR8 indicate that the collective market share

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[12] See “Agency Report,” *Advertising Age*, 74 (April 23, 2003), pp. S4 and S12.
[13] See the profiles of suppliers of marketing research in Honomichl (2003).

position of the largest holding companies falls considerably short of the level which would obtain if the HCs controlled the largest firms across all sectors of the A&MS industry.

5.0 DISCUSSION

5.1 Advertising Agency Sector

Our analysis of the Census data has shown that the number of firms and establishments and the level of agency receipts in real terms increased from 1977-1992. Subsequently however, the number of firms and establishments decreased while real agency receipts have continued to grow and concentration levels have tended to increase. It seems likely that this rise in concentration was due to several of waves of mergers and acquisitions, the first of which appears to have begun in the late 1950's (Bojanek 1980), followed by others in each subsequent decade (Kanner 1979, Snyder and Petrecca 1999, Winski 1990). Interestingly, a pair of mergers involving large agencies that took place in 1978 drew attention from the Federal Trade Commission and the Justice Department. However, the cases were not pursued, presumably on the grounds that neither posed a threat to competition (Gordon 1979).

The pattern of change in agency concentration resembles somewhat the trends in aggregate concentration in the U.S. economy reported by Pryor (2001) who analyzed weighted concentration ratios for different sectors of the economy from 1963 to 1992. He found that concentration decreased from 1963 to 1982 but then increased in 1992.[14] In a follow-up study, Pryor (2002) found that concentration increased considerably from 1992

[14] Also see White (2002).

to 1997 in the manufacturing and retail sectors but not in the wholesale sector. He attributed this difference to the wave of mergers in the 1990's.

5.2 Other A&MS Sectors

Concentration levels vary across the nine sectors, but all are within the range generally considered indicative of a competitive industry. The two sectors with the highest CR4's in 2002 (40 per cent or above), Display and Advertising Materials Distribution, are both relatively small, having shares of the A&MS total of less than 6 and 2 percent respectively. In terms of shares of total A&MS revenue in 2002, Advertising Agency and Media Buying were the largest and smallest sectors, respectively, but both had CR4's of around 30 percent. Among the remaining sectors, three (Public Relations, Direct Mail, and Marketing Research) each had CR4's of approximately 20 percent while the CR4's for the other two sectors (Other and Marketing Consulting) were both less than 10 percent.

5.3 Holding Companies

The four largest holding companies have captured a fifth to a fourth of the total U.S. revenue flowing to suppliers of advertising and marketing services each year during the period, 2002-2006. This is a much smaller share than has often been cited in discussions of the concentration in the A&MS industry which almost unanimously stress the "dominance" of the holding companies. For example, Dooner (2002), citing data published in *Advertising* Age, presented a chart showing that the "share of 2001 domestic gross income of the top 30 Global Ad Organizations" held by the "top 4" holding companies (Interpublic, Omnicom, WPP, and Publicis) was 74 percent. The latter clearly overestimates CR4 for holding companies inasmuch as the gross income of the largest 30 "Ad Organizations" reported in *Advertising Age* totaled only $18.037 billion.[15] That figure greatly understates the size of even the six sector definition of the total A&MS market which, based on the Census data presented in Table 3, was $43.891 billion in 1997 and $64.842 billion in 2002. Other instances where Holding Company CR4's have been overestimated as a result of ignoring revenues for other than the largest 50 or 100 firms when calculating the size of the total A&MS market can be found in the trade press (e.g., Bloom 2005).

A quite different view has been expressed by Mandese (2002) who has argued that the dominance of the major holding companies has been greatly overstated. Using media billings data for 2000 from *Advertising Age*, he calculated that the media buying services owned by the four largest holding companies accounted for 25 per cent of total U.S. advertising expenditures and 29.5 percent of worldwide advertising expenditures; the latter two estimates of the size of the U.S. and Worldwide advertising markets, respectively, being those developed by Universal McCann. Mandese suggests that while the holding companies do dominate media buying in certain media heavily used by national advertisers (e.g., network television and consumer magazines), that is not the case for other media categories such as newspapers and radio utilized in local or regional campaigns where media buying is done by independent outside or in-house agencies. Mandese (2002) sees the position of the holding companies as limited:

> For all the hype surrounding the frenetic pace of agency mergers and acquisitions, the consolidation has mainly been an intermural game. The reality is that most ad budgets remained highly diffused and, for the most part, far too localised ever to

[15] See "Agency Report," *Advertising Age*, 73 (April 22, 2002), S10.

> come under the stranglehold of the major conglomerates, no matter how finely they winnow themselves down (p. 8).

The holding company concentration estimates shown in Table 5 support Mandese's dissenting and nuanced view. After several waves of mergers and acquisitions, the collective position of the major holding companies in the U.S. is considerably less than dominant in the sense that each of the sectors comprising the A&MS industry contains very large numbers of smaller firms who account for approximately three-quarters of the total A&MS revenues. This analysis has assumed that the definition of the geographically relevant market in which holding companies compete is the entire U.S. Inasmuch as the holding company's business units generally have multiple offices in various parts of the country; this assumption is consistent with holding company practices.

Studies of concentration levels in the A&MS industry for countries other than the U.S are scarce and dated.[16] Clearly investigations of holding company operations in different countries are needed to develop an understanding of the global position of holding companies, but the availability of comparable data is likely to be problematical (cf. von der Wurff, Bakker, and Picard 2008).

6.0 CONCLUSIONS

This paper analyzes changes in concentration levels in the U.S. A&MS industry using data that have been largely ignored in past discussions of the economic organization of this industry, namely those available from the U.S. Census Bureau's

[16] Discussions of the organization of the advertising industry in earlier periods are available for Canada (Palda 1988), Germany (Thiel 2005), Great Britain (West 1988), and Japan (Moeran 1996).

quinquennial Economic Census and the Service Annual Survey. We define the A&MS industry in terms of nine sectors, each of which is represented by a separate 5 digit NAICS category. In so doing, we have sought to redress some of the measurement problems surrounding estimates found in the existing literature. Our main findings are threefold.

First, in the case of the core and largest sector, Advertising Agencies, firm level concentration as measured by HHI, remained relatively unchanged and low for firms from 1977 through 1992, and then increased slightly in 1997 and again in 2002 to 194. HHI values for establishments were consistently lower than those for firms. None of the estimates of HHI approached the value of 1,000 used by the Department of Justice and Federal Trade Commission to discriminate between an “unconcentrated” and “moderately concentrated” industry. The concentration ratios also indicated an increase in concentration in more recent periods with CR4 and CR8 rising to 34 and 41 percent, respectively in 2002, when CR50 was 52 percent and the sector was comprised of almost 8,700 firms . We find partial support for the polarization hypotheses in that over time the size distributions of agency receipts have become more skewed, more dispersed, and increasingly unequal in how revenues are distributed across the total population of advertising agencies. However, contrary to the proposition that the ranks of mid-sized agencies were depleted by ongoing waves of mergers and acquisitions, the position of mid-sized agencies appears to have changed little over the period 1977-2002, as measured by the shares of agencies and receipts they represent. Over this same period however, the share of total receipts realized by small agencies fell while that of large agencies rose.

Second, firm concentration ratios available from the 1997 and 2002 Economic Censuses show that concentration levels vary across the nine sectors comprising the A&MS industry, which also differ markedly in revenues. Excluding Advertising Agencies discussed above, the two sectors with small shares of total industry revenue (Display Advertising and Advertising Materials distribution) had the largest CR4 levels in 2002 (42-45 percent). Among the other seven sectors, three had CR4's of approximately 30 percent in 2002 (Advertising Agencies and Media Buying Services); another three had CR4's of around 20 percent (Public Relations, Direct Mail, and Marketing Research); and two had CR4's of less than 10 percent (Other Services and Marketing Consulting). Only two sectors are populated by less than a thousand firms and each of the other seven sectors have several thousand firms. Overall, the evidence on concentration for the individual sectors accords with the size structures expected for competitive markets with large numbers of sellers.

Finally, the annual concentration ratios reported here indicate the four largest holding companies captured between a fifth and a quarter of the total revenues arising the A&MS industry, a share that remained quite stable over the period, 2002-2006. This estimate is lower by an order of magnitude than the estimates often cited in the trade press. It appears that this overstatement is a result of the practice of counting only the revenue of the largest firms when estimating the size of total A&MS revenue, thereby excluding the revenue accrued by smaller firms and understating the size of the total market, and in turn, overestimating the concentration ratio. For these reasons, we advocate use of the data available from the quinquennial Economic Census and the

Service Annual Survey in estimating the size of the U.S. A&MS market and concentrating levels within this industry.

Table 1

U.S. DEMAND FOR ADVERTISING AGENCY SERVICES: 1977-2002

Series	1977 SIC 7311	1982 SIC 7311	1987 SIC 7311	1992 SIC 7311	1997 NAICS 54181	2002 NAICS 54181
No. Agencies[a]						
Firms	7,633	8,504	9,990	11,020	9,545	8,699
Establishments	8,089	9,079	10,716	11,861	10,327	9,836
Ratio: E/F	1.06	1.07	1.07	1.08	1.08	1.13
Agency Receipts[a] ($ Millions)						
Current $	3,168.560	5,763.746	10,019.662	13,210.968	16,498.774	20,668.346
Constant $	5,463.034	6,186.824	7,889.498	8,836.768	8,544.161	8,874.344
Tot. U.S. Adv. Expend.[b] ($ Millions)						
Current $	37,440	66,670	110,270	132,650	187,529	236,875
Constant $	63,458	71,688	86,827	87,790	97,115	101,707
Agency Rec. as a % of Adv. Expend.	8.46	8.63	9.09	9.96	8.80	8.73
Adv. Media Cost Index[b] (1982-84=100)	59	93	127	151.1	193.1	232.9

[a] Compiled from data reported in *Census of Service Industries* (1977-1992) and Economic Census, *Establishment and Firm Size, Professional, Scientific, and Technical Services* (1997 and 2002). The data used are for the "firms" that operated the entire year—except for 1977 where the data are for firms that were operating at the end of the year.

[b] The total U.S. advertising expenditure series is that prepared by Robert Coen, Universal McCann, New York. The Advertising Media Cost Index used to convert Advertising Expenditures and Agency Receipts to constant $ is the cost per thousand exposures (CPM) for national and local budgets also available from Robert Coen.

Table 2

CONCENTRATION MEASURES FOR THE U.S. ADVERTISING AGENCY SECTOR: 1977-2002[a]

Measure	1977 SIC 7311	1982 SIC 7311	1987 SIC 7311	1992 SIC 7311	1997 NAICS 54181	2002 NAICS 54181
Herfindahl-Hirschman Index (HHI)						
Firms (Revenue)	80	89	88	81	140	195
Establishments (Revenue)	12	16	14	11	12	10
Cofficient of Variation (CV) Firms (Revenue)	7.437	8.331	8.637	8.752	10.424	11.532
Gini Coefficient (GC)						
Firms (Revenue)	0.796	0.798	0.790	0.779	0.813	0.838
Concentration Ratio (CR)						
Four Firm (CR4)	NA	NA	13.1	14.1	21.0	34.0
Eight Firm (CR8)	NA	NA	21.9	21.9	30.0	41.0
Twenty Firm (CR20)	NA	NA	33.6	30.5	38.1	47.1
Fifty Firm (CR50)	NA	NA	40.5	36.6	44.4	51.8

[a] The data used to calculate the Herfindahl-Hirschman Indices, Coefficients of Variation, and Gini Coefficients for firms and establishments are the receipt size distributions reported in the *Census of Services Industries*for 1977-1992 and the Economic Census, *Establishment and Firm Size, Professional, Scientific, and Technical Services* for 1997 and 2002. The size distributions are reported for firms and establishments that operated for the entire year, except for 1977 where the data are for firms and establishments that were operating at the end of the year. The number of size categories used in Census reports of receipts distributions of firms and establishments, respectively, was as follows: 1977, 12 and 9; 1982 11 and 10; and 1987-2002, 11 and 11. The concentration ratios are those reported in the same sources cited above.

Table 3

MID-SIZE ADVERTISING AGENCIES SHARE OF FIRMS AND RECEIPTS: 1977-2002

			Share of Firms/Share of Receipts %		
Census Year	(1) Range of Mid-Size Agency Receipts (Millions Current $)	(2) Related Census Size Categories	(3) Mid-Size Agencies	(4) Agencies Larger than Mid-Size	(5) Agencies Smaller than Mid-Size
1977	9.3 ~ 46.6	10 ~ 19.9 20 ~ 49.9	0.12/ 4.04 0.13/ 9.74 (0.25/13.78)	0.16/26.68	99.59/ 59.56
1982	13.6 ~ 68.1	10 ~ 24.9 25 ~ 49.9 50 ~ 99.9	0.26/ 5.76 0.04/ 1.82 0.12/11.69 (0.42/19.27)	0.12/25.49	99.45/55.24
1987	15.9 ~ 79.5	10 ~ 24.9 25 ~ 49.9 50 ~ 99.9	0.46/6.57 0.11/3.84 0.06/3.67 (0.63/14.08)	0.13/30.15	99.24/55.77
1992	18.8 ~ 93.8	10 ~ 24.9 25 ~ 49.9 50 ~ 99.9	0.73/9.20 0.15/4.41 0.06/4.04 (0.94/17.65)	0.10/26.71	98.96/55.64
1997	20.7 ~ 103.6	10 ~ 24.9 25 ~ 49.9 50 ~ 99.9	0.93/8.12 0.23/4.60 0.13/5.23 (1.29/17.95)	0.12/34.81	98.60/47.24

Table 4

FIRMS, RECEIPTS, PAYROLL EXPENSE, AND GROWTH RATES BY SECTORS OF THE U.S. ADVERTISING AND MARKETING SERVICES INDUSTRY: 1997 AND 2002[a]

Sector	Firms (Establishments)		Sector Share of Total Industry Receipts (%) ($ Mill. Sector Receipts)		Annual Payroll as a % of Sector Receipts		Sector Growth CAGR: '97-'02 (%)	
NAICS	(1) 1997	(2) 2002	(3) 1997	(4) 2002	(5) 1997	(6) 2002	(7) Receipts	(8) Firms (Estab.)
54181 Adv. Agencies	12,607 (13,390)	11,351 (12,489)	27.3 (16,871.520)	26.6 (21,103.772)	44.8	45.5	4.6	-2.1 (-1.4)
54182 Public. Relations	6,213 (6,513)	6,482 (6,847)	7.7 (4,771.957)	7.8 (6,204.729)	40.9	43.2	5.4	0.9 (1.0)
54183 Media Buying	762 (882)	777 (888)	1.7 (1,056.713)	1.5 (1,150.307)	39.9	39.6	1.7	0 4 (0.1)
54185 Display	1,920 (2,261)	2,088 (2,526)	7.5 (4,638.974)	5.8 (4,616.626)	17.7	20.2	-0.1	1.7 (2.2)
54186 Direct .Mail.	3,252 .(3,454)	3,512 (3,754)	14.1 (8,672.234)	13.3 (10,544.455)	28.0	25.9	4.0	1.6 (1.7)
54187 Materials Distribution	488 (560)	552 (646)	1.3 (829.683)	1.9 (1,487.845)	21.1	24.0	12.4	2.5 (2. 9)
54189 Other Services	8,748 (9,086)	8,118 (8,500)	14.8 (9,140.356)	11.2 (8,844.402)	17.5	20.8	-0.7	-1.4 (-1.3)
54191 Mktg. Res. & Poll	3,266 (4,030)	4,568 (5,460)	12.8 (7,879.886)	13. 8 (10,890.323)	37.6	37.5	6.7	6.9 (6.3)
541613 Mktg. Consult.	12,332 (12,498)	18,533 (18,887)	12.8 (7,874.497)	18.1 (14,329.430)	32.4	32.1	12.7	8.5 (8.6)
Total			100.0 (61,735.820)	100.0 (79,171.884)			5.1	

[a] The data on firms, establishments, receipts, and payroll were taken from the U.S. Bureau of Census reports on the 1997 and 2002 Economic Censuses, *Establishment and Firm Size, Professional, Scientific, and Technical Services*, October, 2000 and November, 2005, respectively.

Table 5

FIRM CONCENTRATION BY SECTOR OF THE U.S. ADVERTISING AND MARKETING SERVICES INDUSTRY: 1997 AND 2002[a]

		Firm Concentration Ratio (%					
NAICS Category Sector	(1) Census Year	(2) CR4	(3) CR8	(4) CR20	(5) CR50	(6) HHI (Firms)	(7) HHI (Est.)
54181	1997	21.1	30.0	38.1	44.4	140	12
Adv. Agencies	2002	34.0	41.0	47.1	51.8	195	10
54182	1997	15.6	20.2	25.6	32.7	*	14
Public Relations Agencies	2002	17.7	21.4	27.4	33.8	112	12
54183	1997	25.0	30.9	42.9	60.8	*	111
Media Buying Services	2002	30.1	39.0	50.3	65.7	*	*
54185	1997	44.1	56.2	66.8	74.8	*	47
Display Adv. Services	2002	45.6	52.5	61.5	70.1	*	*
54186	1997	19.6	24.5	32.7	42.9	106	21
Direct Mail Adv. Services	2002	18.6	23.5	32.2	43.6	*	*
54187	1997	29.8	42.7	60.0	75.9	*	*
Adv. Materials Distribution	2002	41.9	51.5	67.8	82.1	*	*
54189	1997	9.2	13.6	20.7	30.3	*	*
Other Adv. Services	2002	7.5	11.4	18.7	28.5	32	15
54191	1997	21.1	27.5	38.7	50.6	*	23
Mktg. Res. & Polling	2002	23.2	34.4	45.6	54.4	171	22
541613	1997	7.3	10.1	14.8	21.9	*	12
Mktg .Consulting Services	2002	5.3	8.1	12.6	19.1	*	8

* Revenue data were withheld for two or more size categories from sector size distribution in conformance with the Census Bureau's confidentiality policy.

[a]-The data used to calculate the Herfindahl-Hirschman Indices for firms and establishments are the receipt size distributions reported in the 1997 and 2002 Economic Censuses, *Establishment and Firm Size, Professional, Scientific, and Technical Services*, October, 2000 and November, 2005. The concentration ratios are those reported in the same sources cited above.

Table 6

HOLDING COMPANY CONCENTRATION RATIOS FOR U.S ADVERTISING AND MARKETING SERVICES INDUSTRY: 2002-2006

Year	(1) 8 Sector Tot. Ind. Revenue[a] ($Mill.)	(2) 8 Sector Annual Growth Rate (%)	(3) CR4 (%)	(4) CR8 (%)		(5) 6 Sector Tot. Ind. Revenue[a] ($Mill.).	(6) 6 Sector Annual Growth Rate (%)	(7) CR4 (%)	(8) CR8 (%)
2002	64,482	---	17.6	20.4		54, 510	---	20.9	24.3
2003	67,035	4.0	19.0	22.0		56,455	3.6	22.6	26.1
2004	73,340	9.4	18.7	21.0		61,771	9.4	22.2	24.9
2005	76,737	4.6	19.9	22.2		64,891	5.1	23.6	26.2
2006	82,750	7.8	19.9	22.2		69,844	7.6	23.6	26.3

[a] The data for the 8 and 6 sector revenue totals were calculated by summing the revenues for the set of NAICS categories identified in the text as reported in the U.S. Census Bureau, *Service Annual Survey 2006*, January 2008.

APPENDIX A

Table A1

SUMMARY STATISTICS FOR CENSUS REVENUE SIZE DISTRIBUTIONS OF U.S. ADVERTISING AGENCY SECTOR: 1977-2002

Statistic	1977 SIC 7311	1982 SIC 7311	1987 SIC 7311	1992 SIC 7311	1997 NAICS 54181	2002 NAICS 54181
Mean Revenue/Firm ($ Millions) Current $ Constant $1995[a]	 0.415 0.894	 0.677 0.995	 1.003 1.262	 1.199 1.278	 1.729 1.669	 2.375 2.100
Standard Deviation (Current $)	3.086	5.640	8.663	10.494	18.019	27.400
Coefficient of Variation	7.437	8.331	8.637	8.752	10.424	11.532
Relative Skewness	19.776	22.491	25.074	28.058	27.840	24.349
Relative Kurtosis	429.670	551.044	663.573	861.048	801.564	601.722
Gini Coefficient	0.796	0.798	0.790	0.779	0.813	0.838
Herfindahl-Hirschman Index	80	89	88	81	140	195
Number of Agencies (Firms)	7,733	8,504	9,990	11,020	9,545	8,699

[a] Current $ were converted to constant $1995 using the GDP Implicit Price Deflator.

Figure 1
ANNUAL % CHANGE IN TOT. ADV. EXP.
(Current $ and Constant $)

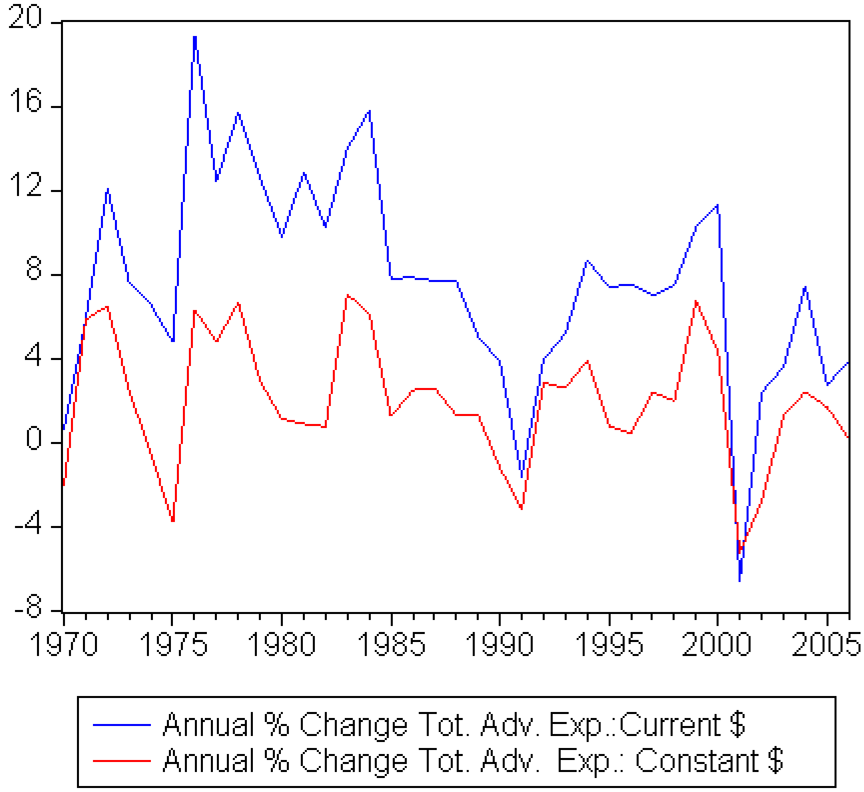


Figure 2
ANNUAL GROWTH RATES; PRICE INDICES

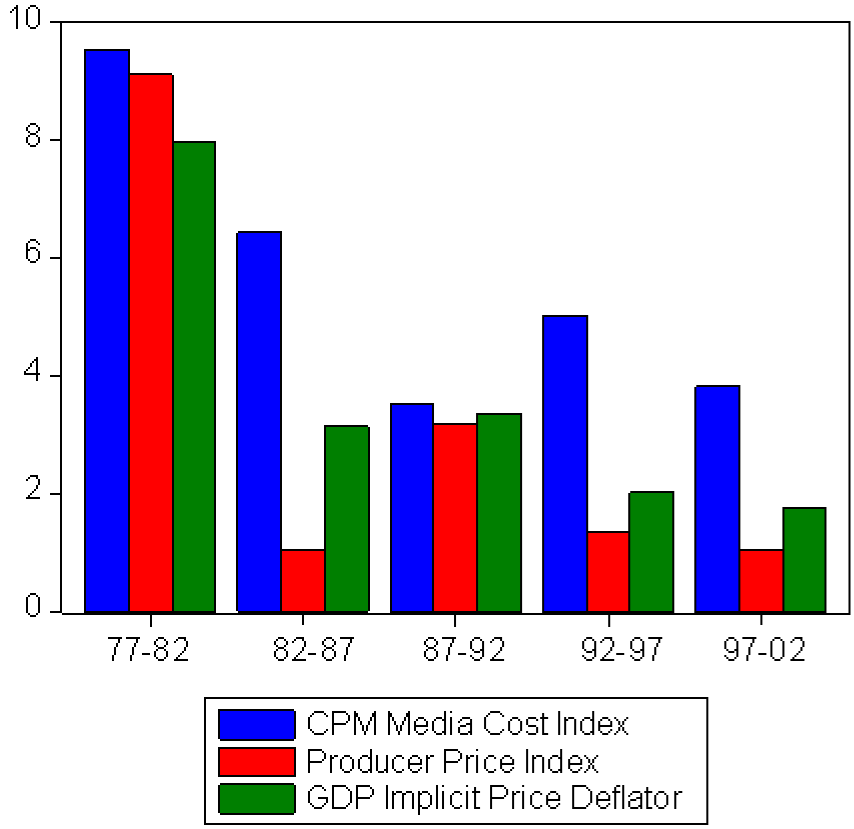
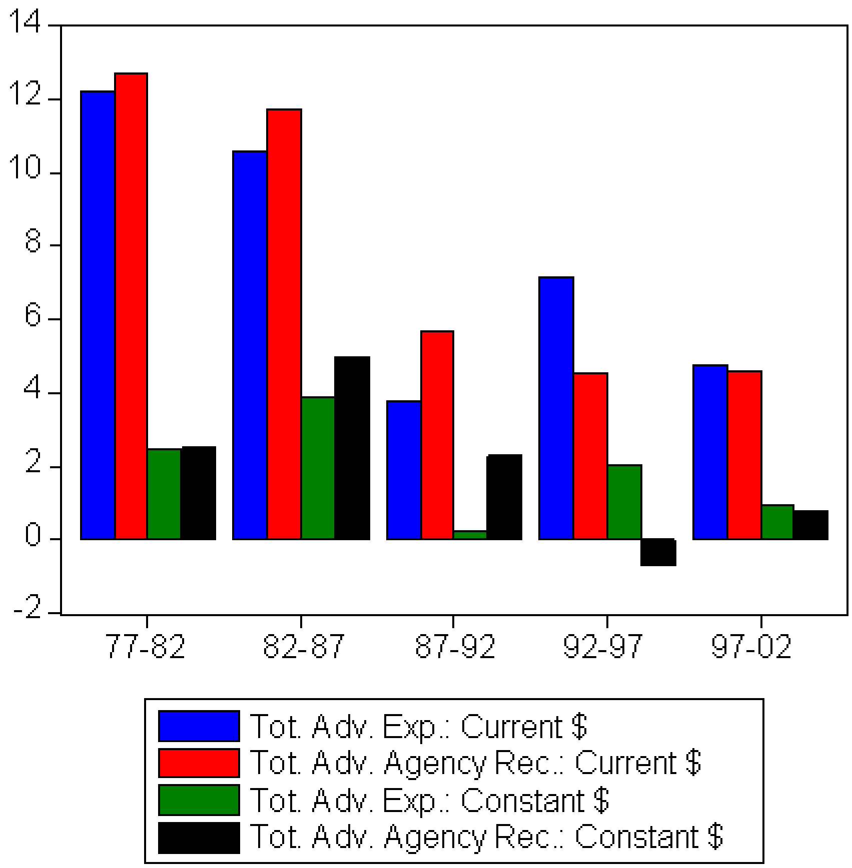


Figure 3
ANNUAL GROWTH RATES; ADV. EXP.
AND AGENCY REV. (Current and Constant $)



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