

**APPENDICES TO:  
FIRM SIZE AND INDUSTRY STRUCTURE UNDER HUMAN CAPITAL  
INTENSITY: INSIGHTS FROM THE EVOLUTION OF THE GLOBAL  
ADVERTISING INDUSTRY**

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May 2009

## APPENDIX I: INTERVIEWS WITH INDUSTRY PARTICIPANTS

The analysis in this paper was informed by interviews with a range of industry participants. The interviews were used to understand the industry context and to test early hypotheses about the evolution of the industry and the nature of advantages of firms of different sizes. Table 1 lists the positions of those interviewed. Interview candidates were identified on the basis of several criteria: (1) founders or managers of firms that had pursued specific transactions, such as going public, organizing as a holding company, or being acquired by a holding company; (2) founders or managers of firms from a range of size classes—small agency, large agency, holding company; (3) managers who selected ad agencies or advised clients in selecting ad agencies, in order to get customers’ perspectives on selection criteria; and (4) individuals who observe the industry from other viewpoints (e.g., investment banker, trade association staff, journalist).

The interviews were conducted by myself alone and were driven by open-ended questions that varied according to the position of the interviewee. For example, individuals whose firms had pursued relevant transactions were asked about the reasons for pursuing those actions; firms of different size classes were asked about the advantages and disadvantages of different sized firms; etc. Most interviews lasted between 45 minutes and two hours. The interviews were taped and transcribed, but not coded.

**Table 1: Industry Participants Interviewed**

<i>Agency Founders and Executives</i>	<i>Other Industry Participants</i>
Director of Strategy, Holding Company	Director, Trade Association
Executive VP, Large Boston Agency	Investment Banker
Founder/Art Director, Midsize Boston Agency	Industry Consultant, Boston
Founder/Account Mgr., Midsize Boston Agency	Industry Consultant, NY
Founder, Small Boston Agency	Marketing Director, Retailer (Client)
CEO, Large NY Agency	Marketing Supervisor, Retailer (Client)
VP Strategy, Large NY Agency	Industry Journalist
Former CEO, Large NY Agency	
Former Senior Executive, several NY agencies	
Founder/Art Director, several NY agencies	

## APPENDIX II: LARGEST 100 FIRMS AND CONCENTRATION RATIOS

Analyses of the structure of the advertising industry since 1960, including estimates of concentration ratios, were based on lists of the largest 100 advertising firms, globally and in the US, at the beginning of each decade (1961, '71, '81, '91, 2001). These lists were constructed primarily from *Advertising Age*, which publishes an annual "Agency Report" listing the largest advertising firms worldwide (holding companies and agencies), along with their revenue. This appendix describes adjustments to the *Advertising Age* data which were required (a) to maintain consistency across the decades, (b) to generate figures at both the holding company and agency levels of organization, and (c) to maintain consistency between numerator and denominator in the concentration ratios. At the end of this Appendix, I provide in Tables 2 and 3 the resultant revenue data for the world's largest 20 firms in each year (at the holding company level and the agency level) upon which the concentration estimates were based.

### *Revenue*

All revenue figures in this paper represent global gross income, unless specified as U.S. gross income. Advertising agency revenues have traditionally been measured in two ways: through "billings" and "gross income." "Billings" represent the total media expenditures by an agency's clients and are relevant to agency size because agencies buy media space and time on clients' behalf and were traditionally compensated through a commission rate of 15% on those media expenditures (though compensation has been shifting to fee-for-service models, particularly since the 1990s (Beals 2007, Arzaghi et al 2008). "Gross income" is the sum of an agency's commissions plus any additional fees and therefore represents an agency's revenues, in the way the term revenue is generally construed. In this paper, all references to revenue are based on gross income figures. Two issues should be noted here: one adjustment, and one non-adjustment.

First, prior to the mid-1970s, billings is the only size metric reported by *Advertising Age* for all but a few large agencies. Billings were converted to gross income figures in the 1961 and 1971

reports by multiplying by 0.1515, which was the average ratio of gross income to billings for those agencies for which both measures were reported in these periods.

Second, large advertising firms often have minority equity investments in other agencies. *Advertising Age* calculates a firm's total revenue by including the pro-rated share of any minority affiliate's revenue. This is not consistent with GAAP procedure, and results in instances where the *Advertising Age* figures are larger than those reported by publicly-traded firms in annual reports. This means that the revenue of the largest firms is likely overstated relative to GAAP methods. However, I have not adjusted the Advertising Age numbers, because using the same source for all of the numbers helps to preserve comparability across years (as well as comparability between public and private firms). Furthermore, including the revenue of minority affiliates is consistent with the context of the research question. The basic puzzle is how a single firm can “own”—i.e. appropriate the returns from—large chunks of advertising business without any obvious alienable assets. Firm revenue is effectively being used as a proxy for the scope of returns that a firm is appropriating, so to the extent that a firm is receiving a fraction of the returns from its minority affiliates, the revenue measure should also reflect that fraction.

#### *Agency-level vs. holding company-level calculations*

To calculate separate statistics for the agency level and the holding company level, two separate lists of the largest advertising firms were needed. The holding company level list includes only independent firms, and includes both holding companies and independent agencies (agencies that were subsidiaries of holding companies are not included in this list, but their revenue is captured inside their holding company's total revenue). The agency level list includes all agencies listed in *Advertising Age's* Annual Reports, whether independent of subsidiaries of holding companies—but it excludes holding companies which do not directly provide advertising services, but only own subsidiary agencies. To create these lists, several adjustments to the Agency Reports were required, depending on the year.

**Before 1990**, *Advertising Age's* Agency Report was a single list that included both parent agencies and subsidiary agencies. To create the holding company level lists for 1961, 1971, and 1981, I simply excluded any firms that were subsidiaries of other agencies or of the major holding company of that period, Interpublic. I also added Interpublic to the list and calculated its revenue as the sum of the revenue listed for its subsidiaries. To create the agency level lists for this period, I simply used all the firms listed in the Agency Report. However, I did have to adjust the revenue of some firms, because for these years, *Advertising Age* used a “double-dipping” method whereby the revenue figures for firms that owned other firms on the list included the revenue of the subsidiaries. Hence, the revenue of the subsidiaries was ultimately listed twice, i.e., it was “double-dipped.” Thus, for the agency level lists, the revenue listed for any agency that owned other agencies on the list was reduced by the amount of revenue listed for its subsidiaries.

**After 1990**, *Advertising Age* stopped “double-dipping,” and also split the annual ranking into three lists: (1) the world’s “top 100” (in 2001) or “top 50” (in 1991) independent advertising organizations, which includes holding companies; (2) the world’s top 25 “consolidated” agencies, which includes agencies owned by holding companies, but aggregates those agencies’ *own* subsidiaries into a total revenue figure; and (3) roughly 500 U.S. “brands,” which includes both independent and subsidiary agencies, but lists an estimate of only their *U.S.* revenue *excluding* their own distinct subsidiaries.

So, for 1991 and 2001, the holding company level lists started with the “top 50” and “top 100” organizations list. A handful of firms engaged primarily in marketing services were dropped (as described later on). Then, to fill the resultant missing spots in 2001 and 1991 as well as the the 50 missing spots in 1991 (because the list was only top 50), I added the largest independent agencies from the “brands” list. Since the “brands” list only includes U.S. revenue and excludes non-U.S. agencies, the revenues of these “brands” firms added to the holding company level list are somewhat underestimated. But the majority of these firms only populate ranks 50 to 100 in the 1991 list, and the top 100 list in 2001 indicates that firms smaller than rank 50 have almost no non-US revenue. So

this underestimation is immaterial. (It is completely immaterial to the concentration estimates since those only involve the top 4 firms).

The agency level list was created from the holding company list by first excluding the holding companies (defined as firms from the top 100 or top 50 list that do NOT appear on the “consolidated agencies” or “brands” list because they do not produce advertising services directly), then adding in the agencies from the “consolidated” list.

#### *Total Market Size*

Concentration ratios require an estimate of the total market size. One possible source is the U.S. Census, which provides estimates of total annual receipts for each industry classification. However, these figures only provide data on the U.S. market. Robert Coen, an executive at a large ad agency (McCann-Erickson), publishes estimates of annual worldwide (and U.S.) advertising expenditures (i.e., what clients spend) (Coen 2002). Coen’s estimates include spending at both a local and national level on print (magazines, newspapers, trade press), radio, TV, direct mail, internet, and outdoor advertising. To convert Coen’s estimates of advertising expenditures by clients into estimates of total advertising agency revenue, I use the ratio of ad agency receipts from the U.S. Census to Coen’s estimates of U.S. advertising expenditures. Between 1977 and 2002, this ratio averaged 0.09 (and ranged from only .086 to .101) (Silk & King 2008), so I estimate total global ad agency revenue as 0.09 times Coen’s worldwide expenditures. I recognize that this involves making the assumption that the ratio of advertising expenditures to agency receipts outside of the US is the same as that inside the US and I have no evidence to support that assumption. However, I also have no reason to believe that this ratio is substantially different outside the US and I have no other data with which to make a more accurate estimate of global advertising industry revenues.

#### *Traditional Advertising vs. Marketing Services*

One other important adjustment involves distinguishing between traditional advertising revenue vs. marketing services revenue. As noted above, Coen’s market size estimates include traditional advertising but not other marketing services (with the exception of direct mail). The US

Census estimates of ad agency receipts, used to convert Coen's estimates into total market size, are also based on estimates of only traditional advertising. However, ad agencies, especially larger agencies and holding companies, have increasingly diversified beyond traditional advertising into marketing services. The revenues reported by *Advertising Age* include marketing services revenues (except in the "Brands" lists after 1990). This means that relying on *Advertising Age*'s revenue figures for the numerator of any concentration ratio will generate an upward bias over time, as the numerator includes increasing amounts of revenue outside of traditional advertising while the denominator does not. I correct for this bias in a number of ways.

First, I exclude from both the holding company and agency lists in 1991 and 2001 any firms primarily engaged in marketing services, which *Advertising Age* began including in its Top 100 / Top 50 lists after 1990 (such firms are identified in Tables 2 and 3 below as having marketing services as 100% of their revenue (MS%=100)). Second, I reduce the revenue of agencies and holding companies within the top 20 (since concentration ratios up to C20 only depend on the top 20 firms) by the percentage of revenue estimated to be from marketing services. The estimated share of revenue from marketing services for each of the top 20 firms is indicated in Tables 2 and 3 below in the %MS column. These estimates were generated in a number of ways:

- For publicly-traded holding companies and agencies (the top eight in 2001, top six in 1991), estimates were derived from information provided in annual reports (and graciously provided by Al Silk).
- For a few other large agencies, firm-specific estimates were generated by comparing total revenue reported in the "Top 100 / Top 50" lists with the "consolidated" revenue reported in the "Consolidated Agencies" (which reportedly excludes some marketing services subsidiaries).
- Finally, for any other firms in the top 20 for which firm-specific estimates were not available, I used the median share of marketing services revenue from the estimated firm-specific figures. For 1991, the median revenue share of marketing services was 7% (though some holding

companies' estimates were as high as 37%). For 2001, the median share was 27%. (Median estimates in the %MS column are indicated in italics in Tables 2 & 3 below).

Ultimately, in trying to match numerator with denominator, the estimates of C4 presented in this paper are based on a number of judgments and assumptions. Different judgments and assumptions would particularly affect the estimated *levels* of C4. However, the important point for this paper is not the specific level of C4 but its change over time. The changes estimated here are arguably more robust than the levels, as the sources used were consistent over the entire period and the adjustments prioritized maintaining consistency across years. The key source of uncertainty remains the amount of non-traditional marketing services in the numerator vs. denominator.

## **REFERENCES**

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- Silk, A., C.I. King. 2008. Concentration Levels in the US Advertising and Marketing Services Industry: Myth vs Reality. Working paper #09-044, Harvard Business School.



**Table 2. Top 20 Firms – HOLDING COMPANY LEVEL, GLOBAL – Numbers represent millions of \$**

	1961	1971	1981	1991			2001						
				Ad+MS	Firm	%MS Ad only	Firm	Ad+MS	Firm	%MS Ad only	Firm		
firm1	57.6	117.3	559.7	2661.8	wpp	37.0%	1676.9	wpp	8165.0	wpp	54%	4709.9	ipg
firm2	49.2	105.3	428.0	1798.9	ipg	6.8%	1676.6	ipg	7981.4	ipg	41%	3231.2	omc
firm3	39.4	85.6	353.0	1705.5	s&s	7%	1586.1	s&s	7404.2	omc	56%	3738.8	wpp
firm4	37.6	76.3	338.4	1471.2	omc	33.4%	1160.8	dentsu	4769.9	publicis	21%	3768.2	publicis
firm5	27.0	64.4	286.5	1451.0	dentsu	20.0%	980.8	y&r	2795.5	dentsu	20%	2242.6	dentsu
firm6	24.7	64.0	236.7	1057.1	y&r	7.2%	979.8	omc	2733.1	havas	61%	1320.9	grey
firm7	20.6	50.2	205.2	1016.3	euro	7%	942.1	euro	1863.6	grey	29%	1065.9	havas
firm8	19.2	44.9	198.6	659.3	grey	7%	613.1	grey	1174.5	ccg	26%	869.5	ccg
firm9	17.6	42.5	170.3	655.6	hakuholdo	7%	609.7	hakuholdo	874.3	hakuholdo	27%	874.3	hakuholdo
firm10	17.2	38.8	165.0	616.0	fcg	7%	572.9	fcg	394.6	asatsu	27%	394.6	asatsu
firm11	15.6	37.1	164.0	576.6	burnett	7%	536.2	burnett	358.5	tmp	27%	261.7	tmp
firm12	15.0	36.3	143.4	534.6	darcy	7%	497.2	darcy	356.1	carlson	100%	181.3	incepta
firm13	14.2	35.6	133.4	512.8	publicis	34.0%	338.4	publicis	248.4	incepta	27%	148.8	tokyu
firm14	13.9	30.1	127.5	277.0	bddp	7%	257.6	bddp	235.5	digitas	100%	148.2	daiko
firm15	13.5	29.1	118.9	221.0	bozell	7%	205.5	bozell	203.9	tokyu	27%	129.3	maxxcom
firm16	13.2	26.5	103.0	176.9	tokyu	7%	164.5	tokyu	203.0	daiko	27%	103.7	cheil
firm17	13.2	25.8	97.8	174.3	daiko	7%	162.1	daiko	189.2	aspen	100%	83.4	doner
firm18	12.3	24.8	85.2	171.3	ayer	7%	159.3	ayer	177.1	maxxcom	27%	74.6	yomiko
firm19	9.8	23.0	77.6	166.2	asatsu	7%	154.6	asatsu	142.0	cheil	27%	69.5	cossette
firm20	8.9	22.9	76.5	159.9	dai-ichi	7%	148.7	dai-ichi	114.2	doner	27%	66.4	clemenger
top 4 revenue	184	385	1,679				6,100					15,448	
Global Ad Expend. (Coen'02)	18,700	37,900	118,800				281,400					456,100	
Industry Revenue (9% of Expend.)	1,683	3,411	10,692				25,326					41,049	
C4	10.9%	11.3%	15.7%				24.1%					37.6%	

**Table 3. Top 20 Firms – HOLDING COMPANY LEVEL, GLOBAL – Numbers represent millions of \$**

	1961	1971	1981	1991			2001						
				Ad+MS	Firm	%MS Ad only	Firm	Ad+MS	Firm	%MS Ad only	Firm		
firm1	57.6	117.3	428.0	1451.0	dentsu	20.0%	1160.8	dentsu	3032.2	mccann	27%	2213.5	
firm2	49.2	90.0	331.7	1016.3	euro	7%	980.8	y&r	2795.5	dentsu	27%	2040.7	
firm3	39.4	85.6	277.3	1057.1	y&r	7.2%	945.2	euro	2484.1	ddb	27%	1813.4	
firm4	37.6	76.3	247.9	829.2	s&s	7%	771.2		2332.9	bbdo	27%	1703.0	
firm5	27.0	64.4	243.9	811.6	mccann	7%	754.8		1913.5	lowe	27%	1396.9	
firm6	24.7	64.0	198.6	794.9	o&m	7%	739.3		1805.7	euro	27%	1318.2	
firm7	20.6	50.2	187.1	772.8	bbdo	7%	718.7		1715.3	grey	27%	1252.2	
firm8	19.2	44.9	181.5	729.7	lintas	7%	678.6		1644.9	jwt	27%	1200.8	
firm9	17.6	42.5	176.4	727.0	jwt	7%	676.1		1580.3	o&m	27%	1153.6	
firm10	17.2	38.8	170.3	698.4	ddb	7%	649.5		1519.3	y&r	27%	1109.1	
firm11	15.6	37.1	165.0	659.3	grey	6.7%	615.1		1509.2	publicis	27%	1101.7	
firm12	15.0	36.3	164.0	655.6	hakuholdo	7%	609.7		1324.3	tbwa	27%	966.7	
firm13	14.2	35.6	143.4	630.4	backer	7%	586.3		1129.4	burnett	27%	824.5	
firm14	13.9	30.1	133.4	616.0	fcg	7%	572.9		903.2	darcy	27%	659.3	
firm15	13.5	29.1	127.5	576.6	burnett	7%	536.2		874.3	hakuholdo	27%	638.2	
firm16	13.2	26.5	110.3	534.6	darcy	7%	497.2		862.4	fcg	27%	629.6	
firm17	13.2	25.8	106.0	512.8	publicis	7%	476.9		728.0	bates	27%	531.4	
firm18	12.3	24.8	103.0	277.0	bddp	7%	257.6		624.8	s&s	27%	456.1	
firm19	9.8	23.0	97.8	221.0	bozell	7%	205.5		394.6	asatsu	27%	288.1	
firm20	8.9	22.9	85.2	220.4	lowe	7%	205.0		358.5	tmp	27%	261.7	
top 4 revenue	184	369	1,285				3,858					7,771	
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