

Are Giant Companies Taking Over the US Economy?

Should
We Care?



THE DYNAMIC DUO STUDIO

By Lawrence J. White

Each time the U.S. economy experiences a major wave of large mergers – as it did in the 1980s and 1990s – pundits infer the worst about the impact on the economy’s structure. Are mergers overwhelming decentralizing forces in the market, increasing the risk that some companies will gain market power and that democratic institutions will be undermined? Could this ironic headline to a quarter-century-old *New York*

Magazine article by Andy Tobias – “March 3, 1998: The Day They Couldn’t Fill the Fortune 500” – be coming true?

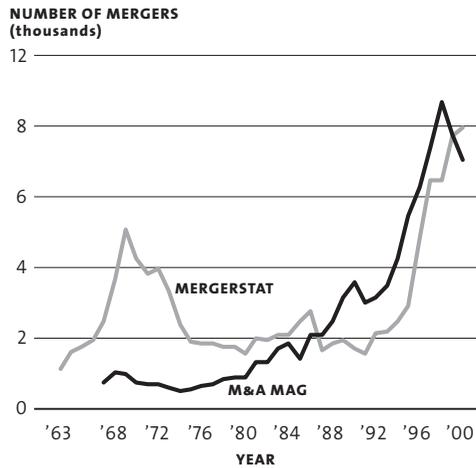
As researchers in this field discovered long ago, data problems as well as conceptual ambiguities make these more difficult questions to answer than one might expect. Here, I attempt to shed new light on industrial concentration – the share of various economic aggregates accounted for by the largest firms – employing two rarely-used sets of data covering the 1980s and 1990s. The numbers show clearly that, despite the recent wave of mergers, aggregate concentration actually declined during the 1980s and early 1990s. It did rise during the mid-1990s, but has only recently approached the levels of the late 1980s. The most intriguing question is why – and what the answers mean for Americans.

THE MERGER WAVE

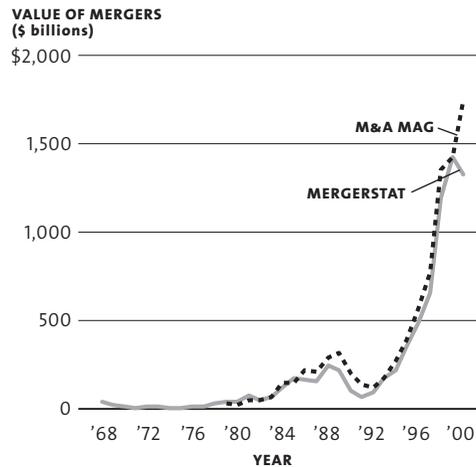
Annual economy-wide data on mergers and acquisitions can be found in two standard sources: Mergerstat Review and *Mergers & Acquisitions* magazine. Both track only large M&As, compiled from news reports; the merger of Nora’s Coffee Shop with Joe’s filling station (“Eat Here and Get Gas!”) will not be included in either data set. Both sources offer data on the annual number of M&As and on the aggregated purchase prices of the M&As. In both, the value series is even less complete than the simple numbers series because transaction terms may not be disclosed for acquisitions involving non-public companies. Since these non-public transactions tend to be the smaller ones, however, the gap is less serious than might be expected.

A wave of large mergers in the 1990s peaked in 1999 or 2000. The *Mergers & Acquisitions* data also show a rise, albeit smaller, in the 1980s, while the Mergerstat data show no such rise in the 1980s but do suggest that the

ANNUAL NUMBER OF LARGE MERGERS



ANNUAL VALUE OF LARGE MERGERS



merger wave of the late 1960s and early 1970s was substantial in sheer numbers.

The data from the two sources are more consistent for the value-of-mergers series; there was a modest wave in the mid-1980s that peaked in the late 1980s and then a far more sizable wave that began in the early 1990s. To put them in perspective, these data should be adjusted for growth in the economy. However, when the data are normalized

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by annual GDP or other plausible measures, the graphs show the same patterns. Only when the value of mergers is adjusted by aggregate stock market values does a somewhat different pattern emerge: that the merger wave of the 1990s was no bigger than the wave of the 1980s.

WHY MEASURE CONCENTRATION?

Unease with corporate power has a long history in the United States, extending back at least to the populist movement of the late 19th century and, arguably, back to Jefferson's vision of a nation founded on the values of small farmers. The antitrust laws were one response to these concerns, notably the Sherman Antitrust Act of 1890, the Clayton Antitrust Act of 1914 and the Federal Trade Commission Act of 1914. The states moved against corporate concentration even earlier, prohibiting interstate branching by banks and often limiting in-state branch banking. The idea was to keep banks small and focused on local financing needs.

The populist concern about the growth of large corporations was most tangibly felt through legislation following the stock market crash of 1929 and the onset of the Great Depression. The creation of the National Recovery Administration, permitting nearly a thousand industry groups to develop "codes of fair competition" to discourage price cutting, was designed to protect small businesses from predation. The Robinson-Patman Act of 1936 prohibited price discrimination, with the goal of helping small retailers by preventing their larger rivals from muscling discounts from suppliers. In the same spirit, the Miller-Tydings Resale Price Maintenance Act

of 1937 championed the cause of small retailers, especially pharmacists, eager to limit price-cutting by their chain-store rivals. Even the Agricultural Adjustment Acts of 1933 and 1936 had the preservation of small, family farms as a major goal. After World War II, the Eisenhower Administration established the Small Business Administration to subsidize small businesses. This was also the goal of small-business set-asides for Defense Department procurement and price-support legislation for the long-sanctified family farm.

The beat goes on. In the late 1970s, for example, legislation that would have limited mergers by large firms, even when the maintenance of competition was not an issue, was seriously considered. And the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994, which endorsed interstate branch banking, nevertheless limited the fraction of a state's bank deposits that any single institution could hold.

Even setting aside populist concerns, it seems clear that the feel and fabric of a big economy in which, say, only 100 companies accounted for virtually all economic activity would be quite different from one in which economic activity was decentralized. These differences need not be the consequence of market power – the ability to keep prices above cost. After all, if all 100 of these companies had roughly equal presences in all markets, there could hardly be market power. Nevertheless, with only 100 companies accounting for virtually all of private sector gross domestic product in the United States, the average company would employ a million workers and generate \$80 billion in value-added. The landscape for employment opportunities or for the funding of new ideas, for example, would be quite different from that found in a less concentrated economy. Even if there were 1,000 economy-wide com-

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panies and the per-company magnitudes were only a tenth as large as just mentioned, we would still be describing a very different landscape than is present today.

Whatever the nature of the concerns – whether they stem from populist sentiments or some other values – and whether or not any concerns are warranted, information

revenue. This measure seems appropriate for comparisons with non-financial firms. But the employees of financial firms primarily think of firm size in terms of assets – which brings us to another candidate.

Using a firm's assets as the basis for assaying concentration presents unique problems. If banks, insurance companies and mutual

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making it possible to track changes in concentration would be useful.

HOW TO MEASURE CONCENTRATION

If large companies raise concern because of their potential economic power, then the total value-added of companies is probably the most relevant measure. Some other candidate measures – payroll or profits – are simply components of value-added. Another candidate, sales revenue, which was popularized by the Fortune 500 rankings, presents obvious problems: merging an upstream oil development company with an oil refiner could have a large effect on the concentration of sales revenue in the oil business, but little or no effect on competition.

Note, too, that the sales concept is poorly defined in the case of financial institutions. Should sales include a brokerage firm's revenue from securities transactions on behalf of its customers? Should it include sales from its own portfolio? In practice, neither category is reported as sales revenue. Instead, financial firms register their interest and fee income, plus any gains from trading operations, as

funds are included, there will be substantial double counting since their assets are largely loans and investments in non-financial companies. These companies, in turn, use these funds to invest in assets of their own. Also, because there are two alternative accounting treatments for M&As, substantially different levels of assets could appear on an acquiring company's balance sheet depending on which accounting method an acquirer chose to use.

Despite the superiority of value-added as an all-around measure, one offsetting factor should be considered: politicians' emphasis on jobs and wage income, and the political clout a company can enjoy if it can promise more jobs or higher wages. Accordingly, a focus on the employment share and on payroll share of large companies within their sectors may well be an appropriate gauge of concentration.

Actual Measures

Unfortunately, value-added data are not widely collected at the company level. The only exception is the Census Bureau's Annual Survey of Manufactures' reporting of the relative

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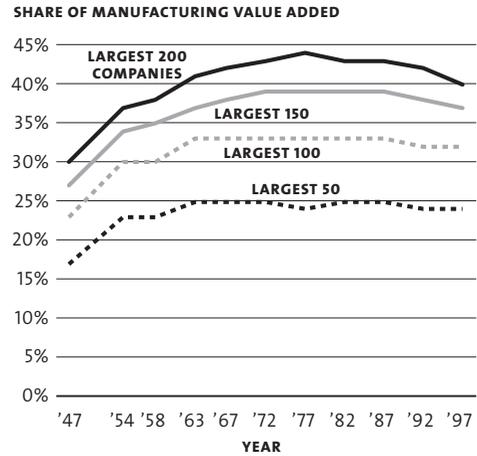
value-added of the 50-, 100-, 150- and 200-largest manufacturers against the base of all manufacturing enterprises for the economic census years 1947 through 1997. But manufacturing has never constituted as much as a third of the private sector and it now yields just one-fifth of private value-added. Consequently, data for manufacturing don't say much about economy-wide concentration.

In the absence of broader company-level value-added data, efforts to measure concentration have focused on employment, profits and non-financial firms' assets. The Fortune 500 lists, introduced in 1954, were based on sales and initially included only manufacturing and mining companies, meaning that firms as large as AT&T were initially excluded. However, the list's reach was expanded in the early 1970s so that economy-wide concentration measures of employment and profits could be compiled for the 1970s on a reasonably consistent basis.

A drawback, however, was that the company data for employment and profits were based on consolidated company reports, and thus included non-U.S. operations of U.S. companies. As a result, the concentration measure – the fraction of U.S. employment (or profits) accounted for by the largest companies – had a numerator that included some non-U.S. employment (or profits). And, so long as the large firms were expanding their non-U.S. operations at a different rate from their U.S. activities, year-to-year comparisons were misleading. Note that *Fortune* changed its coverage yet again in the early 1980s so that measurements for these years were not comparable with those of the 1970s.

Asset data for the 50-, 100-, 150- and 200-largest non-financial companies were compiled by the Federal Trade Commission from 1958 to 1988. But, the data were incomplete

AGGREGATE CONCENTRATION IN MANUFACTURING, AS MEASURED BY VALUE ADDED



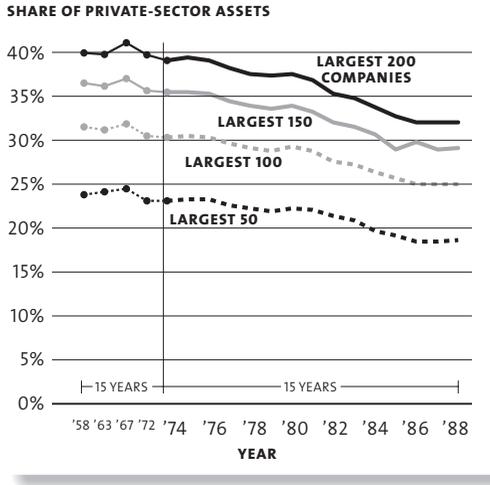
because they excluded financial firms. And, in any case, the numbers had the same drawbacks as other asset measures.

What Did the Earlier Measurements Indicate?

The cleanest data, as well as longest comparable series, have been the Bureau of the Census' value-added data for manufacturing for the economic census years, plus a few additional years, between 1947 and 1997. They indicate a rise in manufacturing concentration between 1947 and 1954, a more gradual rise for the next three decades, and then a decline in the 1990s. By 1997, manufacturing concentration was back to the 1963 level. But, of course, manufacturing was only a modest fraction of the private sector – 31 percent of private gross domestic product in 1947, rising to a peak of 33 percent in 1955 and falling to 21 percent in 1999.

The next longest data series is the FTC's non-financial corporations' assets. These numbers indicate a modest decline in concentration between the late 1950s and the late

AGGREGATE CONCENTRATION IN THE NON-FINANCIAL SECTOR, AS MEASURED BY ASSETS



1970s, and then a steeper decline in the 1980s. Finally, my own work based on the *Fortune* lists shows that concentration in both employment and profits changed little during the 1970s.

And for what it's worth, Andy Tobias' tongue-in-cheek prediction in 1976 didn't come true in the 1980s and 1990s. *Fortune* had no trouble finding candidates to fill out its list of the 1,000-largest companies across all sectors of the U.S. economy ranked by sales revenue for 2000. The 1,000th was Amica Mutual Insurance Company, with 2000 revenues of \$1.2 billion, assets of \$3 billion and 3,316 employees. The largest company in terms of revenue was Exxon Mobil, with \$210 billion; the largest company by assets was Citigroup, with \$902 billion.

THE NEW NUMBERS

My new data come from two sources: a relatively new series encompassing employment and payroll, which has been compiled by the U.S. Census, and the longer-standing, "500" lists compiled by *Forbes*.

**The Bureau of the Census
Employment and Payroll Data**

The census data cover nearly all of the private sector and are disaggregated by major industries. The series begins in 1988, with the data grouped by company size based on employment. At my request, the Census compiled the data for the numbers of firms, employment and payroll for the broad industry sectors for a complete range of size categories that extend to 10,000 and above employees. In addition, the bureau specially compiled the employment and payroll aggregates for the largest 100, 500 and 1,000 economy-wide companies for each year.

The data are not perfect for our purposes. First, they cover only the years since 1988. Second, they cover only employment and payroll, not value-added. Third, they exclude the self-employed, farms, railroads, the Postal Service, households as employers, and large pension and health care insurers. But they offer big advantages over other data series: they are more comprehensive, more consistent from year to year, and they exclude non-U.S. operations while including the U.S. operations of non-U.S. companies. Also, these are the first-ever series to use payroll information for measuring economy-wide concentration.

The total number of companies, as well as their employment and payrolls, grew from 1988 through 1998. The average employment of companies also grew and their average payrolls grew even faster. Employment concentration declined through 1995 and then rose so that by 1998 it was approaching late-1980s levels. The decline in payroll concentration through the mid-1990s was more pronounced than for employment. Despite some increases after 1995 or 1996, payroll concentration was lower in 1998 than it had been in 1988.

Another facet of the employment data is worth noting. Earlier research by John Kwoka

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and me found that the fraction of employment accounted for by relatively small firms declined between 1988 and 1996. Since firms with fewer than 500 employees were losing their employment shares even as the largest companies were barely holding their own,

ECONOMY-WIDE NUMBERS, EMPLOYMENT AND PAYROLLS OF COMPANIES

YEAR	AGGREGATE NUMBER OF COMPANIES (thousands)	AGGREGATE EMPLOYMENT (thousands)	AGGREGATE PAYROLL (\$ billions)	AVERAGE EMPLOYMENT PER COMPANY	AVERAGE PAYROLL PER COMPANY (\$ thousands)
1988	4,955	87,844	\$1,859	17.7	\$375.2
1989	5,021	91,626	1,990	18.2	396.3
1990	5,073	93,469	2,104	18.4	414.7
1991	5,051	92,308	2,145	18.3	424.7
1992	5,095	92,828	2,272	18.2	445.9
1993	5,194	94,774	2,363	18.2	454.9
1994	5,277	96,722	2,488	18.3	471.5
1995	5,369	100,315	2,666	18.7	496.6
1996	5,478	102,187	2,849	18.7	520.1
1997	5,542	105,299	3,048	19.0	550.0
1998	5,579	108,118	3,309	19.4	593.1

moderate to large firms in between must have been the net gainers. As a related matter, it is interesting to consider the size-distribution of enterprises in the U.S. economy and how it changed between 1988 and 1998. One good measure is what economists call the Gini coefficient. The Gini coefficients for firms' cumulative employment and payroll shares showed gradual but steady increases between 1988 and 1998, indicating that the distribution of employment and of payroll was becoming slightly more unequal over these years. This pattern is consistent with the loss of shares by smaller firms.

One digression here. For reasons ranging from unionization and supervision issues to skill demands, larger firms have traditionally paid their employees higher wages than smaller firms. That is apparently still true, since the giant firms' share of payroll is still larger than their share of employment. Over

time, however, this differential narrowed considerably. Just why is unclear.

Forbes Magazine Data

Forbes has been compiling "largest 500" lists since 1958. But it never restricted the accounting to industrial companies, and it compiled four different lists based on sales revenue, profits, assets and stock market value. In addition, since 1980 *Forbes* has reported the employment of all of the companies – typically around 800 companies – that ranked in the top 500 on at least one of its lists.

The *Forbes* lists thus have the major advantages over the better-known *Fortune* lists of broader coverage and year-to-year consistency in coverage. But they share with the *Fortune* lists the disadvantage of presenting consolidated company information. This means that the companies' non-U.S. operations are included and companies that are not headquartered in the U.S. – even giants like DaimlerChrysler – are excluded. For our purposes, the advantages outweigh the disadvantages. The opportunity to use a data set with consistent coverage from 1980 through 2000 for the two major components of corporate value-added – profits and employment – is too good to pass up.

Using the *Forbes* data, it is clear that concentration, as measured by the profits of the largest 500 companies trended downward through 1998, and then rose. But the profit shares for 1999 and 2000 were well below those of the early 1980s, and were in the range of the early 1990s. Employment concentration of the 800 or so companies on all four *Forbes* lists trended downward through 1995 and then rose. But concentration in 2000 was well below that of the early 1980s and was comparable to that of the late 1980s and early

1990s. Thus the concentration estimates drawn from the *Forbes* lists are consistent with those based on the Census Bureau data: concentration has not increased since the late 1980s. The *Forbes* data also suggest that concentration has decreased since the early 1980s.

WHAT'S GOING ON?

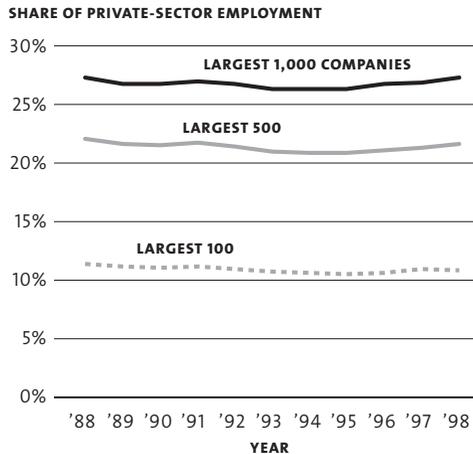
The obvious question here is why, in spite of considerable consolidation, hasn't aggregate concentration increased? Some possible answers may be found in the advantages and disadvantages of firm size. Very large size may be at a disadvantage: a U-shaped rather than an L-shaped average-cost curve (with costs rising beyond some optimal level of concentration) may accurately represent the advantages and disadvantages of size.

By the same token, the net advantages of vertical integration may be overblown – economies of scope in most areas may be weak. CEOs who are empire-minded, or just excessively optimistic, and who are poorly restrained by their boards may create giant firms through mergers and acquisitions. But economic reality eventually intrudes and forces shrinkage and spinoffs.

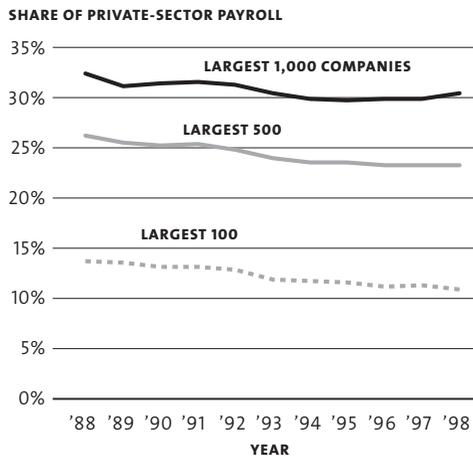
Other explanations may be found in the M&A data itself, which may overstate the extent to which the registered transactions imply an increase in corporate size. First, about a third of the transactions included in the M&A lists are actually divestitures: company A is spinning off a subsidiary. This subsidiary may become a stand-alone entity, in which case concentration decreases. Or it may be bought by another company, in which case concentration can increase or decrease depending on the size of the acquiring company compared to the divesting company. There are no readily available data that would shed light on the impact of divestitures.

Second, a seventh of the M&A totals in-

AGGREGATE CONCENTRATION IN THE PRIVATE SECTOR, MEASURED BY EMPLOYMENT



AGGREGATE CONCENTRATION IN THE PRIVATE SECTOR, MEASURED BY PAYROLL



volve U.S. companies' purchases of non-U.S. companies. If the acquired company has no U.S. activities, such a transaction yields no immediate change in aggregate concentration, as measured by the Census data. Indeed, there could be a decrease in measured concentration if the combined firm achieved

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company-wide efficiencies that led to a decrease in U.S. employment or investment. The transaction would increase concentration as measured by *Forbes*, however. The acquisition would increase concentration by both measures only if the acquired (non-U.S.) company had U.S. operations.

Third, about a tenth of the M&A totals involve non-U.S. companies' purchases of U.S.-headquartered companies. The immediate consequences for the *Forbes* list has already been noted: the acquired company disappears from the list and the acquiring company does not replace it. Concentration automatically decreases.

The effect on the Census Bureau measure has, again, more nuances: if the acquiring (non-U.S.) company did not have previous U.S. activities, concentration is not affected. If the combined company decreases U.S. operations, measured concentration will decrease. If the acquiring company already had operations in the U.S., aggregate concentration increases, although subsequent rationalization of the combined U.S. operations may yield an offset.

The other noticeable pattern – the rising relative importance of the medium- to large-size firms, but not the giants – may be due to a number of influences.

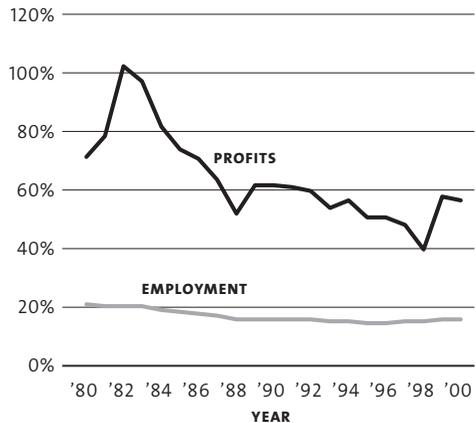
First, in some industries, the importance of sunk costs such as advertising and promotion may be growing, and, as a consequence, the relative advantages of larger firms may be growing as well.

Second, the rising importance of exports for the U.S. has probably given larger firms an advantage since the development and maintenance of overseas markets involve sunk costs and larger firms can more easily subsume these costs.

Third, improved technologies may have

AGGREGATE CONCENTRATION IN THE PRIVATE SECTOR, MEASURED BY PROFITS AND EMPLOYMENT

LARGE COMPANY SHARE OF PRIVATE-SECTOR TOTAL



helped overcome the difficulties of managing large organizations and thus allowed enterprise growth. Finally, the changing importance of the major economic sectors has certainly played a role since the relative importance of large firms in manufacturing was shrinking, while the relative importance of large firms in services was growing.

THE BOTTOM LINE

Companies in the U.S. are, on average, growing larger for perfectly understandable reasons. The merger waves of the 1980s and 1990s may have contributed modestly to that trend. But the giants of industry – the largest 100 or 500 or 1,000 corporations in the U.S. – have not been growing appreciably faster than the overall economy; if anything, they have been growing a bit more slowly.

The U.S. economy remains one in which there are a large number of enterprises – over 5.5 million at the end of the 1990s. Their numbers are growing and they come in a wide variety of sizes.

That's surely a healthy bottom line. **M**