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An Empirical Investigation Focusing on the Composition and Performance of the Fortune 500

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An Empirical Investigation Focusing on the Composition and Performance of the Fortune 500

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***Abstract:** Each year Fortune Magazine categorizes American corporations into a snapshot view of how each performed in the previous year. The list compiles the top 500 companies based upon revenue. The following article looks closer at the NAICS industry sectors that make up the 2008 Fortune 500 list and the performance level of each sector represented using multiple dimensions of analysis. This research investigates the 2008 Fortune 500 companies in terms of their NAICS industry sector, geography, revenue generation, and profitability. The study further explores employment levels and labor productivity within and across sectors. Additionally, the education levels attained by the top executive are revealed. Finally, the report compares industry sectors in an effort to better understand the composition of the 2008 Fortune 500 list and its contribution to the American economy as a whole.*

INTRODUCTION

Much has been done to define American industry and determine the value of its contribution as a whole. Each year, the Fortune 500 list examines America's largest corporations and provides an annual snapshot of how these corporations measure up to each other. The problem experienced with existing literature is the difficulty in locating a composite of aggregate data to define and describe the various dimensions of America's largest corporations. If individuals have a goal or the opportunity to become an entrepreneur they might find it helpful in knowing where to geographically settle, the expected revenues and profits for their chosen industry, along with the size of the workforce. These all are necessary components for a successful business plan. Moreover, prospective employees could utilize the results in order to decide their career paths and where best to geographically reside for their chosen fields.

While relatively small in proportion to the total number of businesses in the United States, not only do these firms contribute significantly to the overall productivity of the nation, they also provide an outlet for smaller businesses to sell their goods through the Supplier Chain and Business to Business (B2B) networks. This can be illustrated through the automotive sector of the economy which indirectly supports three employees through its tier supplier network for every direct employee of the Original Equipment Manufacturers themselves (Goldsmith, 2008). The following research delves further into the 2008 Fortune 500 list and examines the industry makeup, geographical settling, and their revenue contributions as a means of determining who is on top, where industry centralizes, and why the industry thrives

Discussion begins with a look at the 2008 Fortune 500 list and the sectors of American business that define these corporations. Next, there is investigation regarding the geographic regions in which these industries are headquartered. Because the Fortune 500 corporations contribute significantly to the Gross

Domestic Product, we research the highs and lows of revenue and profit margins and figure individual employee contributions to the company's overall bottom line. Sectors are analyzed to each other and across industry lines in order to reach a better understanding of the corporations that are considered the largest and most powerful in America today, the 2008 Fortune 500.

LITERATURE REVIEW

NAICS Composition of the Fortune 500

The North American Industry Classification System (NAICS) is utilized throughout Canada, Mexico, and the United States (U.S.) in order to distinguish business organizations based upon its primary trade and industry. The structure of NAICS enhances the collection, tabulation, presentation, and analysis of data pertaining to business entities located within these countries (United States Census Bureau, n.d.). The categorization of commerce using NAICS has been accepted throughout the regions and it has replaced the previous Standard Industrial Classification (SIC) coding schemes (United States Census Bureau, n.d.).

The NAICS standard permits the standardization and comparability of economic trade within North America when conducting any type of statistical research or publishing industry data whether it is prepared by the government or other researchers, regulatory agencies, taxation, academics, and etc. (Office of Management and Budget, 2005). The NAICS classification system logically organizes companies based upon its principal product or service, which is determined based upon the nature of the revenue being generated by those firms. This process permits the grouping of enterprises that utilize similar production processes to be classified collectively (Office of Management and Budget, 1997).

The NAICS classification is comprised of a hierarchical structure that classifies companies from the broadest level to the most detailed level of their primary business activity (Office of Management and Budget, 2005). According to the U.S. Department of Commerce (n.d.), digits one through five of the six digit code are universally accepted throughout North America. The first two digits identify the organizations sector, the third digit identifies the sub-sector, the fourth digit denotes a company's industry group, and the fifth digit identifies a company's NAICS industry. The sixth digit of the code is reserved for the home country for the organization's industry. Periodic review provides assurance that the trade and industry information being presented is relevant, timely, and accurate (Office of Management and Budget, 2005). The last update was conducted in 2007 (North American Industry Classification System, n.d.).

When an organization conducts business within multiple activities, the NAICS code that is assigned to that company is based upon the organization's principal product or group of products being produced or distributed, or the services being rendered (United States Census Bureau, n.d.). The principal product or service for these firms is determined by its proportional share of current production costs and the investment in capital for that organization (United States Census Bureau, n.d.). In order to classify organizations, other variables including revenue, number of shipments, and employment have been utilized (United States Census Bureau, n.d.). When measuring production, the most commonly used alternative has been the organizations sales revenue, followed by that of employment.

Geographic Dispersion of the Fortune 500

In the past, the corporate headquarters for all major U.S. enterprises have tended to cluster around large metropolitan areas because it is within these large metropolitan areas that companies were able to locate the necessary infrastructure, such as support services, major airports, major highways, and telecommunications, all which have been deemed to be critical components in order to carry out the activities required for those organizations (Klier & Testa, 2002). For example, in 1955, the New York

metro area accounted for 31% of all corporate headquarters in the U.S., and from this, 28% of the organizations were designated as leaders by Fortune Magazine within its first published 500 ranking (Diacon & Klier, 2003). According to Dow Jones, firms that locate within the larger metropolitan areas have found the additional benefit of being able to recruit and retain a more highly skilled professional when firms are centrally located in proximity of the large metro areas (Klier & Testa, 2002).

Today, the nation has seen a shift in the location of corporate headquarters within the U.S. even though the volume of sizeable publicly traded companies in the U.S. grew by 37% (Diacon & Klier, 2003). For instance, in 1999, the companies listed on the Fortune 500 ranking represented only 10% of the corporate headquarters in the New York metro area, yielding a 64.3% decline in Fortune 500 corporate headquarters located in the New York area since 1955 (Diacon & Klier, 2003). A contributing factor to this 64.3% plunge was due to the growth exhibited by smaller firms who now appear within the Fortune 500 ranking and these developing firms tend to be located within the mid-size metropolitan areas rather than urban areas (Klier & Testa, 2002).

Texas is now the primary home to 58 of the corporate headquarters, surpassing New York and the second ranked location of California (Associated Press, 2008). According to Klier and Testa (2002), the re-location of corporate headquarters to other urban areas will tend to lag behind the shift in industries. However, Texas is expected to continue being the recipient for those large companies desiring to relocate because these companies can benefit by being surrounded by other large companies (Associated Press, 2008). These other firms can provide the vast array of services, such as accounting, law, information technology, and etc., which is critical for successful businesses.

Revenue and Profit in the Fortune 500

According to Fortune Magazine, 2005 resulted in a record setting year. These Fortune 500 companies generated a total of \$9.1 trillion in sales revenue, yielding a combined bottom line of \$610 billion (McGirt, 2006). In 1955, the year Fortune Magazine published its first ranking, the sales revenue of the Fortune 500 companies as compared to the Gross Domestic Product (GDP) was 39%, and this figure has increased to 73.4% by 2006, with the expectations that the sales revenue of the Fortune 500 could conceivably exceed the GDP for economic output in years to come (McGirt, 2006).

According to the Organization for Economic Co-operation and Development (OECD), in 2005 the global economy grew by 4.25%, which translated into the higher profits being earned by the companies listed on the Fortune 500 (McGirt, 2006). As part of this growth, the U.S. economy grew by 3.5% and Fortune 500 organizations enhanced their sales revenue by 10.2%, with combined profits of \$610 billion or an average increase of 18.8% (McGirt, 2006). Many of the Fortune 500 companies have substantial revenues being generated overseas. A profitable year globally can enhance the bottom line for these domestic-based organizations.

A firm's accounting net profit is often termed as net income, net earnings, or the bottom line, and is defined as being the difference between the amount of revenue generated by the firm and all of its expenses incurred during a period of time, normally one year. Investors, creditors, and managers often investigate a company's performance based upon the profitability of an organization (Gallagher & Andrew, 2003). Net profit margin is a financial tool that permits investors, creditors, and managers to evaluate how effective a firm controls the costs of the organization.

Percentages are frequently utilized in practice when assessing the financial health of organizations. For instance when Microsoft announced its first quarter results, even though the company's sales were .3% higher than the previous year, its net income was down by 11%, and as a reaction to this news, Microsoft's share of stock plunged 5% (Kaplan, 2008). Analyzing the net profit margin is one technique

employed by interested parties to compare companies within and across sectors to assess which industries are more profitable.

Another method of comparison is the sales revenue per employee, across companies, and across and within industries. Sales revenue per employee is a substantive operating performance ratio that carries great importance to management and for those performing the human resource function of an organization (Loth, 2008). Harnish (2006) reported that larger organizations have a greater employee contribution to revenue than its smaller counterparts; this is because the larger firms, which are professionally managed, have systems and processes in place which increases an employee's value.

Additionally, in a traditionally labor intensive industry, those firms tend to have a lower employee contribution to revenue ratio when compared to those firms operating in a more knowledge intensive environment (Street Authority, 2008). For instance, the top performing organizations within the computer industry have enjoyed above average, almost double, the revenue per employee as compared to their average performing competitors (Harnish, 2006). In 2005, the profits earned by the Information sector grew by 125.9% which enabled these companies to earn their own unique NAICS classification (McGirt, 2006).

The revenues per employee that were generated in 2005, were the highest within the energy related sector, with the industries in the health care and home construction contributing over \$1 million in revenues per employee (Communication Workers of America, 2006). Other industries, which are known for paying low wages, also demonstrated high revenues per employee. For instance, the food and grocery firms generated \$637,514 per employee; while the beverage organizations generated a per employee contribution of \$448,812 (Communication Workers of America, 2006). Overall, the U.S. business and industry revenue generated per employee is \$100,000 (Hoagland-Smith, 2007).

Fortune 500 Employment Levels

The U.S. Census Bureau Economic Census (2008) reported that nearly three-fourths of all U.S. businesses have no payroll. These firms consist of the self-employed and unincorporated businesses. On an average, those organizations tend to have an equivalent of 2.2 paid employees per firm. The Census Bureau (2008) classifies these firms as "Nonemployers", and while those establishments comprise more than 75% of all firms in number, they account for only 3.4% of the total U.S. business receipts annually.

Additionally in 2004, the U.S. Economic Census data reported that 25,409,525 "Employer and Nonemployer" firms were in existence within the U.S. (United States Census Bureau, 2008). Conversely, large companies in the U.S., more specifically, America's largest revenue producing firms, are defined as the Fortune 500. In 2004, these Fortune 500 firms reportedly employed approximately 24 million employees, resulting in an average of 50,000 employees per firm (Revell, 2005). By year end 2005, the Fortune 500 companies were enjoying an average increase in revenues of 10.2%, increases of 18.8% in profits, while at the same time increasing their headcount by only 2% (Communication Workers of America, 2006).

CEO Education by Sector

By the 1970's, the Chief Executive Officers (CEO) of U.S. based companies were attaining higher and higher levels of education. Fortune Magazine reported that by the mid 1970's, 28% of CEO's employed at Fortune 500 companies had graduated from college, with 18% of the CEO's having some level of postgraduate study (Burck, 1976). The rising level of well-educated CEO's is illustrated by the research that was conducted by P.R. Chandy. The results of Chandy's research indicated that over 60% of CEO's have completed coursework beyond the undergraduate level, and that 66% of CEO's hold at least one bachelor's degree (Chandy, 1991).

In a study of 1001 CEO's throughout the U.S. and Europe, Monica Hamori discovered that 38% of CEO's employed with domestic firms held an MBA, as compared to 16% for its European counterparts. Additionally, Hamori (2008) revealed that CEO's holding an advanced degree tended to climb more quickly to the top position of their respective companies as compared to their non-degreed counterparts. Michael Sampson-Akpuru (2008) studied 100 firms within the Fortune 500, uncovering that 90% of the CEO's hold at least a Masters degree.

In a recent survey conducted within the U.S. Health Care sector, the study revealed certain characteristics pertaining to the level of education attainment of the Chief Executive Officer's within the hospital industry. The findings revealed that 95% of CEO's employed within the "best in class" ranked hospitals possessed graduate level degrees, (including MBA, MPA, and etc.), while 81% of the CEO's at median performing hospitals had similar degrees (Cejak Search & Solucient, 2005). Additionally, the "best in class" hospital CEO's had twice the number of advanced degrees of the median performing hospitals.

RESEARCH QUESTIONS

1. What is the composition of the Fortune 500 based on NAICS classification?
2. What is the geographic dispersion of the Fortune 500 companies?
3. What is the relationship between revenue and industry sector of Fortune 500 companies?
4. What is the profit margin in Fortune 500 companies by industry sector?
5. How many employees are employed by Fortune 500 companies?
6. What is the labor productivity of Fortune 500 companies across industry sectors?
7. What is the level of education of Fortune 500 leaders across industry sectors?

METHODOLOGY

Research Design

A quantitative framework was utilized for this exploratory and descriptive research study. This empirical investigation utilized secondary data in order to explore, describe and explain the composition and characteristics of the Fortune 500 companies. The data for the descriptive analysis were gathered from various online business databases and other online sources. The descriptive analysis is not designed to support generalizations across other businesses. The goal of this study is to provide some level of insight concerning the characteristics of the top 500 companies within the United States.

Selection of Companies

The target population of our study included all companies listed on the 2008 Fortune 500 listing. From this listing, the companies were cross-referenced across the Mergent database as well as other online databases. These other sources were also utilized in order to acquire all data that was deemed necessary in order to perform our SPSS analysis. Our data array consisted of 500 cases (one per company) and 45 original variables, and an additional 18 variables were created through SPSS data transformations. Data were obtained for 100% of the companies used in this study of 500 firms. A sampling plan was not utilized, resulting in a census study. The results of this study are applicable to the Fortune 500 and are not intended to be statistically generalized beyond this population. The Mergent online database was utilized to identify the primary NAICS code classification for each of the Fortune 500 companies.

DATA ANALYSIS AND RESULTS

Research Question 1

What is the composition of the Fortune 500 based on NAICS classification?

When measuring the production of diversified firms, the NAICS coding scheme has been found to permit researchers with a form of standardization in order to compare trade within North America. Our analysis utilizes NAICS classification to the two digit level. The two digit level provides a broad level grouping of the Fortune 500 companies by industry and sector. At this level of analysis, there are twenty different industry sectors within North America.

FIGURE 1: DISTRIBUTION OF FORTUNE 500 COMPANIES BASED UPON NAICS

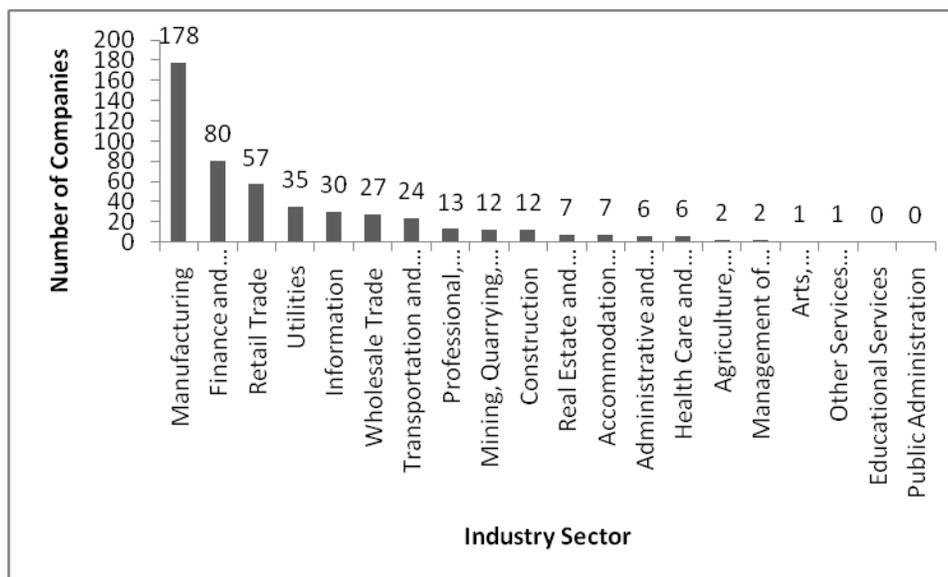
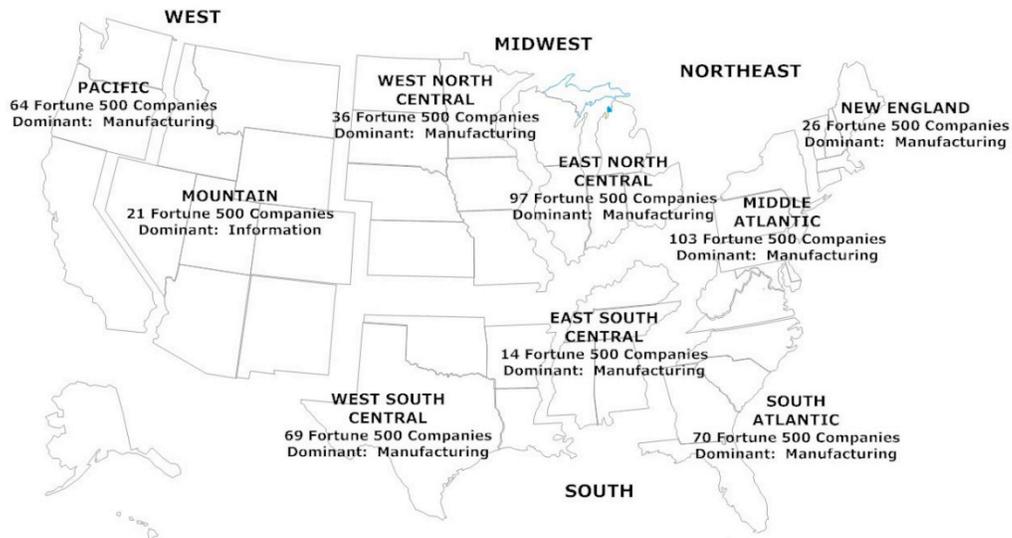


Figure 1 reveals the distribution of U.S. companies across the NAICS classification system. The dispersion is widely varied for these organizations, with Manufacturing (sectors 31-33) clearly dominating and comprising 35.6% of all Fortune 500 companies. The three runner-ups include Finance and Insurance (16.0%), Retail Trade (11.4%) and Utilities (7.0%). In all, these four sectors comprise 70% of all Fortune 500 firms based on the 2008 listing. Fortune 500 companies exist in eighteen of the twenty unique two digit NAICS classifications. The only two industry sectors not represented as being a Fortune 500 company are Educational Services (sector 61) and Public Administration (sector 92). Note that Public Administration would always be excluded from inclusion in the Fortune 500 listing due to the nature of the governmental services it provides.

include the publishing industries, including software, traditional, and internet; the motion picture, recording, and broadcasting industries; as well as the telecommunications industry; and Internet service providers.

FIGURE 3: GEOGRAPHIC CONCENTRATION OF FORTUNE 500 HEADQUARTERS



Research Question 3

What is the relationship between revenue and industry sector of Fortune 500 companies?

While domination thus far resides in the Manufacturing sector, as we turn to the Fortune 500 sales revenue things begin to change. In 2005, companies listed as being the largest 500 firms within the U.S. reported a total of \$9.1 trillion in sales revenue, which was a record breaking year. Since then, sales revenues have continued to climb reaching \$10.6 trillion in 2007. As shown in Table 1, the Management of Companies and Enterprise (sector 55) led the group in terms of sales revenue with \$62 billion on the average being earned. Sector 55 comprised of only two firms, did generate more than twice the sales revenue of the second ranking industry, which was the Finance and Insurance (sector 52) who had an average sales revenue of \$27 billion. The runners up reporting the next highest in terms of sales volume belongs to the Retail Trade sector (\$26.1 billion) and the Manufacturing sector (\$23.8 billion). Combined, these four industries account for 45.1% (\$138.9 billion) of the total average industry revenues of \$308.3 billion. The Real Estate and Rental and Leasing (sector 53) and the Agriculture, Forestry, Fishing and Hunting (sector 11) generate the least amount of revenue across the Fortune 500 profile of industries. An overall difference from the top performing industry to the lowest generating industry results in a difference of approximately 90% between those sectors.

TABLE 1: AVERAGE REVENUE (IN 000'S), PROFIT (IN 000'S) & PROFIT MARGIN PER FIRM BASED UPON NAICS

<u>NAICS Industry Sector (Sector Number)</u>	<u>Revenue per Firm</u>	<u>Profit per Firm</u>	<u>Profit Margin per Firm</u>
Agriculture, Forestry, Fishing and Hunting (11)	\$6,793,850	\$56,550	0.83%
Mining, Quarrying, and Oil and Gas Extraction (21)	\$10,581,625	\$2,062,458	19.49%
Utilities (22)	\$10,977,631	\$835,529	7.61%
Construction (23)	\$7,939,367	\$(417,900)	(5.26%)
Manufacturing (31-33)	\$23,761,513	\$1,650,108	6.94%
Wholesale Trade (42)	\$21,188,381	\$387,426	1.83%
Retail Trade (44-45)	\$26,079,220	\$887,427	3.40%
Transportation and Warehousing (48-49)	\$15,032,459	\$793,663	5.28%
Information (51)	\$20,083,043	\$1,070,003	5.33%
Finance and Insurance (52)	\$27,022,459	\$1,904,741	7.05%
Real Estate and Rental and Leasing (53)	\$6,770,057	\$(143,257)	(2.12%)
Professional, Scientific, and Technical Services (54)	\$11,749,508	\$709,615	6.04%
Management of Companies and Enterprises (55)	\$62,000,350	\$7,668,700	12.37%
Administrative and Support and Waste Management and Remediation Services (56)	\$14,029,683	\$819,600	5.84%
Educational Services (61)	n/a	n/a	n/a
Health Care and Social Assistance (62)	\$10,080,218	\$284,567	2.82%
Arts, Entertainment, and Recreation (71)	\$10,825,400	\$619,400	5.72%
Accommodation and Food Services (72)	\$10,899,786	\$1,000,071	9.18%
Other Services (except Public Administration) (81)	\$12,384,300	\$30,900	0.25%
Public Administration (92)	n/a	n/a	n/a

Research Question 4

What is the profit margin in Fortune 500 companies by industry sector?

External and internal stakeholders often investigate a firm's performance based upon its profitability. Net profit margin has been noted as being one technique employed in order to compare companies within and across industry sector. The margins for net profit within the Fortune 500 industries range from a high of 19.49% dropping down to a net loss of 5.26% as shown in Table 1. The Mining, Quarrying, and Oil and Gas Extraction industry (sector 21) led the group in terms of profit margin by being able to generate almost \$.20 in profit for every dollar that the sector generates in sales revenue, resulting in the best cost control industry. The prime leader in terms of revenue generation, the Management of Companies and Enterprises, placed second in terms of overall net earnings at 12.37%. The second ranked sales revenue industry, Finance and Insurance, came in fifth in terms of overall profits at 7.05%. The predominant geographic sector, Manufacturing, is ranked sixth in terms of industry profitability, yielding a 6.94% bottom line. The worst performing Fortune 500 industry in controlling costs was the Construction sector with net loss of 5.26%, followed by Real Estate and Rental and Leasing with a net loss of 2.12%.

Research Question 5

How many employees are employed by Fortune 500 companies?

In 1994 Fortune 500 firms employed approximately 24 million employees, yielding an overall average of 50,000 employees per firm. Today, those same companies employ a combined workforce of over 25.3 million people, with an average of 50,617 per company. Table 2 shows the average workforce composition in total, and how the employment is distributed across the 18 different Fortune 500 reporting NAICS industries. Due to the growth of the service based economy, it can be seen in Table 2 that the Accommodation and Food Services (sector 72) had the largest volume of employees, with an average employment of 200,386 employees with an average industry profit margin of 9.18% (Table 1). Other Services (except Public Administration) industry (sector 81) comprised the second largest sector of the Fortune 500 workforce. Sector 81 employs on an average 165,000 employees with an average industry profit margin of 0.25% (Table 1).

TABLE 2: AVERAGE EMPLOYMENT & AVERAGE REVENUE PER EMPLOYEE BASED UPON NAICS

<u>NAICS Industry Sector (Sector Number)</u>	<u>Number of Firms</u>	<u>Employment Mean</u>	<u>Revenue per Employee</u>
Agriculture, Forestry, Fishing and Hunting (11)	2	16,250	\$622,136
Mining, Quarrying, and Oil and Gas Extraction (21)	12	13,407	\$1,483,356
Utilities (22)	35	11,357	\$1,218,123
Construction (23)	12	13,801	\$1,174,442
Manufacturing (31-33)	178	47,748	\$718,222
Wholesale Trade (42)	27	27,013	\$2,782,511
Retail Trade (44-45)	57	110,117	\$422,448
Transportation and Warehousing (48-49)	24	54,111	\$1,222,589
Information (51)	30	48,736	\$530,281
Finance and Insurance (52)	80	36,851	\$1,545,782
Real Estate and Rental and Leasing (53)	7	26,585	\$409,490
Professional, Scientific, and Technical Services (54)	13	53,407	\$322,794
Management of Companies and Enterprises (55)	2	107,000	\$885,124
Administrative and Support and Waste Management and Remediation Services (56)	6	38,117	\$423,757
Educational Services (61)	0	n/a	n/a
Health Care and Social Assistance (62)	6	59,994	\$161,985
Arts, Entertainment, and Recreation (71)	1	87,000	\$124,430
Accommodation and Food Services (72)	7	200,386	\$64,716
Other Services (except Public Administration) (81)	1	165,000	\$75,057
Public Administration (92)	0	n/a	n/a

Research Question 6

What is the labor productivity of Fortune 500 companies across industry sectors?

Another known method of profitability comparison was found to be the generation of sales revenue on a per employee basis. This method was determined to be an important facet for those performing the human resource function within an organization. In 2005, the revenue per employee was the highest within the energy related sector, followed by health care and construction. Today, while the employment numbers across the industry sectors vary widely, labor productivity within the Wholesale Trade industry (sector 42) ranks as the highest in terms of overall labor productivity, with each employee contributing over \$2.7 million in revenue. On productivity, the other industry sectors lag behind the Wholesale Trade sector. The second ranked industry is the Finance and Insurance (sector 52), coming in with productivity of \$1.5 million per employee. Table 2 also shows sector 72 (Accommodation and Food Services) ranking the highest in the average number of workers employed, but last in terms of overall labor productivity. The second highest industry in terms of the average number of workers (Other Services) ranked the second lowest in terms of overall labor productivity.

Research Question 7

What is the level of education of Fortune 500 leaders across industry sectors?

Chief Executive Officers managing these enterprises have been reported as having a college degree. A growing trend includes some form of postgraduate study. Table 3 shows the distribution of education level attained by the Fortune 500 CEO's across NAICS industry sectors. As displayed, a graduate degree is held by 302 (60.4%) of the CEO's, with 100% of the 18 reporting industries having at least one CEO holding this advanced degree. Holding an advanced degree is the mode parameter for the level of education among top level Fortune 500 leadership. For those 165 CEO's who have not obtained an advanced degree, they do hold at least a bachelor's degree.

DISCUSSION AND CONCLUSIONS

The problem experienced with existing literature was the difficulty in locating a composite of aggregate data to define and describe the various dimensions of America's largest corporations. The purpose of this study was to close the gap in the literature by defining and describing the various performance dimensions of Americas largest corporations—The Fortune 500. By integrating several existing sources of data, we were able to provide a perspective on the composition, distribution, and performance of the big business enterprises in America.

There are several key findings which have emerged from our study. Of key interest was the fact that in 2008, the Manufacturing sector clearly dominated the economic sectors within the U.S. In this sector, 178 individual firms proved to be more than twice the size of the second ranking Finance and Insurance sector, which consisted of 80 firms. Companies diversify or become more vertically integrated within their value chain, which permits organizations to venture into multiple activities and conglomerate operations. Our research showed that the manufacturing continues to be the principle business activity within the U.S.

Geographically, the Southern U.S. (which includes Texas) was found to be the largest home for Fortune 500 headquarters. A contributing factor to this experienced growth was a result of smaller firms who now appear on the Fortune 500 rankings. These firms tend to settle in mid-size metropolitan areas

verses large urban areas. With Texas being the flourishing state for businesses, the Southern states should experience an expansion from the migration and start-up of additional firms. The Manufacturing sector

TABLE 3: CEO EDUCATION LEVEL WITHIN THE FORTUNE 500

<u>NAICS Industry Sector (Sector Number)</u>	<u>Less than Bachelor</u>	<u>Bachelor</u>	<u>Graduate and Above</u>
Agriculture, Forestry, Fishing and Hunting (11)	0	1	1
Mining, Quarrying, and Oil and Gas Extraction (21)	0	3	9
Utilities (22)	1	5	29
Construction (23)	1	4	7
Manufacturing (31-33)	8	56	114
Wholesale Trade (42)	4	15	8
Retail Trade (44-45)	9	29	19
Transportation and Warehousing (48-49)	1	13	10
Information (51)	4	6	20
Finance and Insurance (52)	3	23	54
Real Estate and Rental and Leasing (53)	0	1	6
Professional, Scientific, and Technical Services (54)	1	4	8
Management of Companies and Enterprises (55)	0	1	1
Administrative and Support and Waste Management and Remediation Services (56)	0	2	4
Educational Services (61)	n/a	n/a	n/a
Health Care and Social Assistance (62)	0	0	6
Arts, Entertainment, and Recreation (71)	0	0	1
Accommodation and Food Services (72)	1	2	4
Other Services (except Public Administration) (81)	0	0	1
Public Administration (92)	n/a	n/a	n/a
Total CEO's	33	165	302

was the predominant form of business throughout out the four census divisions within the U.S. However on a regional breakdown, the Mountain region was led by the Information sector, while Manufacturing remains the prevailing mode of business within the other eight regions. In the past, headquarters of large enterprises tended to cluster around locations that were able provide the necessary infrastructure and population that was deemed necessary for business success. Our analysis confirms these components are important factors of these leading firms, which can explain the paucity of headquarters within the Mountain region of the U.S.

There are expectations that the sales revenue of Fortune 500 companies could conceivably exceed GDP for economic output in the future. The Fortune 500 generated a total of \$10.6 trillion in sales revenue, representing a 16.5% increase over the reported figure of \$9.1 trillion in 2005. The industry leading the group when speaking of sales revenue was the Management of Companies and Enterprises sector. This sector contributed a total of \$62 billion in sales revenue, while at the same time, placed second in terms net profit margin at 12.37%, and fourth in the amount of employees within the organization. This sector clearly led any other Fortune 500 company in its revenue generating ability. The second ranking industry in terms of sales revenue was the Finance and Insurance sector, generating \$27 billion in sales revenue, yet placing fifth in terms of profitability.

Frequently, a firm's accounting net profit (expressed as a percentage) has been utilized when interested parties scrutinize the financial health of organizations. Net profit margin reveals how effective a company controls costs in order to improve its bottom line. In 2005, the Fortune 500 reported \$610 billion in profits, and today, those firms earned \$645 billion, which was an increase of 5.7%. Our study identified the Mining, Quarrying, and Oil and Gas Extraction sector to be the best in controlling its cost, yielding them the highest profit margin (19.49%), even though the industry placed in the lowest quartile in its revenue generating capabilities.

Another important method of organizational assessment was sales revenue supported on a per employee basis. In contrast to profit margins, our study revealed that overall employee productivity was within the Wholesale Trade sector within the U.S. This sector demonstrated an operating performance of \$2.7 million per employee. Labor within these firms tended to be on the lower end of the spectrum, which would tend to create a higher employee contribution to revenue ratio. Management of these firms have systems and processes in place to increase employee value. The largest employment sector, Accommodation and Food Services, finished last in terms of this performance measure. This was not a surprise since these firms operate in a traditionally labor intense sector. Additionally, the second largest labor intensive sector, Other Services finished second to last.

Hoagland-Smith (2007) reported revenue generated per person in all U.S. businesses combined, including Fortune 500 and all other companies, was \$100,000. Additionally noted, industries which customarily pay low wages tend to demonstrate higher revenue per employee. When taken independently, our 2008 ranked study revealed the average industry revenue per employee within the Fortune 500 was \$418,901 in contributions for the year-end 2007. Clearly, big business as defined by the Fortune 500, out performs all other sectors of the business environment in the United States. In 2006, low wage firms within the food and grocery industry yielded \$637,514 per employee in revenue; and in 2007, wholesale firms generated \$2,782,511 in revenue per employee. Our study showed that economies of scale still seem to matter.

Finally, as shown these 500 large corporations today employ a workforce of over 25.3 million, a 1.3 million (5.6%) increase since 1994. The Accommodation and Food Services industry employs the largest number of employees (200,386), these firms tend to generate a moderate amount of sales revenue (\$10.9 billion) and they experienced the third highest overall net profit of 9.18%. The second largest employing industry is held by the Other Services (except Public Administration) sector with 165,000 within its workforce, also had a moderate level of sales revenue and the third worst in terms of profitability (0.25%).

RECOMMENDATIONS FOR FUTURE RESEARCH

This study is limited to the geographical boundaries of the United States, and the large corporations that make-up the Fortune 500 composite. The results contained in this report are not intended to serve as a generalization of all companies, domestic or globally.

As revealed, the Manufacturing sector accounted for 178 of all Fortune 500 companies within the U.S. While the Fortune 500 revenues are eventually funneled back to the parent companies in the U.S., additional research analyzing the specific plant locations, domestic and globally, would broaden our knowledge base for these operations. Further research can also identify the specific location of these company's employees as dispersed throughout the U.S. and the world. Determining where these companies add their value in the execution of their business model, and where their revenues are generated would also be of significant value. Performance measures across time that could be analyzed include revenue, profits and employment.

We have initiated a probe into the leadership characteristics of the American CEO. In the past, 28% of CEO's had graduated from college, with 18% having some form of postgraduate studies. As the business environment continues to change, the education expectations of successful CEO's continues to climb. It was found in 1991 that 66% of CEO's hold at least one undergraduate degree, with over 60% of CEO's completing coursework beyond the undergraduate level. Our initial results indicated that 93.4% of Fortune 500 CEO's either have a bachelor degree (165) or a graduate degree and above (302). Executives with advanced degrees rise more quickly to top positions within organizations. Additional research within the CEO's specific qualities may sharpen our understanding on successful leadership.

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