

# **HOW IMPORTANT IS THE EDUCATIONAL CAPITAL OF CHIEF FINANCIAL OFFICERS? AN EXAMINATION OF EDUCATIONAL CREDENTIALS IN THE CONTEXT OF OTHER ATTRIBUTES**

**R. Drew Sellers**

*College of Business Administration  
Kent State University  
Kent, Ohio  
USA*

**Timothy J. Fogarty**

*Weatherhead School of Management  
Case Western Reserve University  
Cleveland, Ohio  
USA*

**Larry M. Parker**

*Weatherhead School of Management  
Case Western Reserve University  
Cleveland, Ohio  
USA*

## **ABSTRACT**

The Chief Financial Officer (CFO) is a highly compensated, highly prestigious position in modern corporations. This research attempts to study the importance of superior forms of educational capital possessed by such people. Using data collected from publicly traded companies, this study finds that CFOs tend to possess educational credentials from highly ranked schools. This tendency tends to be more common for CFOs employed by the larger companies from this group. Educational capital is also evaluated in the context of work experience. Whereas general work experience did not matter, previous public accounting employment tended to better substitute for the possession of a prestigious educational background. Implications for accounting education are drawn.

**Key words:** Chief financial officers, educational credentials, public accounting work experience, higher educational institutions, human capital

**Data availability:** Data are available upon request from the first author

## INTRODUCTION

Chief Financial Officers (CFOs) have achieved great prominence in the modern corporation (Zorn, 2004). Typically, they possess organizational responsibility for the completeness and integrity of the accounting processes and the fair presentation of financial information provided to investors, regulators, lenders and other stakeholders. Under the Sarbanes-Oxley Act of 2002, CFOs of publicly traded companies became legally responsible for these matters. A CFO is a key member of a company's executive team and is increasingly prominent in corporate strategic decision-making (Johnson, 2015). Therefore, reports of how well compensated CFOs tend to be should be no surprise. Examinations of corporate financial reports indicate that a CFO of a larger publicly traded company typically earns in excess of \$1,000,000 a year in total compensation (Willhite, 2012). Achieving the position of CFO is a clear mark of career success for an individual.

Given the tendency of Chief Executive Officers (CEOs) to come from other educational backgrounds such as marketing and finance (Jalbert et al., 2002; Bartel and Jackson, 1989), one could assert that the CFO position is the best job that a person trained in accounting could reasonably hope to acquire. Therefore, the attainment of these positions should be embraced as a topic for the accounting education literature. Most importantly, the connection between formal education and career success at this level forms an interesting and valuable empirical question. However, educational credentials may just be one element of all the attributes needed to attain career success. Such a successful climb of the corporate ladder may be more indicative of a person's hard work and fortuitous opportunity. CFOs also might be brought into organizations because of high caliber previous work experience. For example, many "alumni" of large public accounting firms become CFOs by effectively leveraging knowledge obtained from their experience servicing a diverse clientele (Iyer et al., 1997). Nonetheless, educational credentials stand out as a sort of brand capital possessed by aspiring CFO candidates. Educational credentials exert particular importance, if only because they are instrumental in allowing a person to initially acquire a position within the business world that begins the ascent to CFO.

Within the set of all the elements that go with the construction of a CFO, how important are educational credentials from top schools? Educational pedigrees might not translate well into the "real world," with its premium on hard work, strong commitment and favorable circumstances. If they are essential, why is that the case? For these purposes, two major possibilities exist. Brand name educational credentials may represent an achievement of the "best and brightest." Individuals with these credentials may be more able, having achieved the more competitive admissions and earned graduation from elite institutions early in their lives. Working with the best raw material, good schools make these people even better. Eventually achieving the CFO position, these individuals can be said to have deserved it as the recipients of the best educational preparation available. Alternatively, these credentials may be mostly a symbolic capital that is desired by their employers. In this instance, people fortunate enough to have attended elite schools are not necessarily made differentially better by their training. However, their impressive educational credentials further the impression that the companies that employ such people are being intelligently managed.

This paper offers to ask several questions about the role of educational capital as it relates to CFO positions. First, how important is educational capital for this important role in corporate America? Second, is the expression of educational capital in this context uniform, or is it more salient for some segments of the CFO market? Finally, this paper seeks to place brand name educational capital in a context of work experience capital, another major credential that may be of value to CFO careers. Specifically, we ask if the accumulated opportunity created by lifetime employment and public accounting work experiences can be configured as alternative forms of human capital, such that they are perhaps capable of overwhelming earlier educational differences.

The paper is organized into four subsequent sections. The first (Literature Review) provides a very brief review of past studies, purposed by the need to motivate testable propositions. For these purposes, we attempt to establish the importance of brand name educational capital to CFOs. Credentials held by CFOs also are contextualized by other attributes of these people. The second section (The Study) describes an empirical approach to test the expectations that were derived from the literature. As part of this, we describe the important measurement choices. The third section (Results) presents the evidence from the tests of the research propositions. The last section of the paper (Discussion) summarizes the major results, discusses their implications, and recognizes their limitations.

### **LITERATURE REVIEW**

This paper accepts the notion that the adequate performance of many jobs requires the possession of esoteric skills. The acquisition of these skills begins with formal education. Those who possess certain academic degrees present themselves to the labor market as the viable pool of candidates for certain positions. Although these credentials do not assure a successful rise to the CFO position, they might be essential to the initial organizational entry, and the subsequent promotions, that culminate in obtaining a CFO job for some candidates.

The matching of people and roles is a process capable of influencing both the public and private welfare. Many countries manage educational systems in a way that progressively winnows the group who might be eligible for the necessary education for particular positions (see Stevenson and Lee, 1997; Feuer and Fulton, 1994). In such countries, the selection process faced by companies is less challenging because the requisite education for high-level positions has been made available to an always smaller group of students as they progress to the end of their studies.

Other countries (most notably the USA) pursue a less formally restrictive allocation strategy. The state does not as explicitly manage access to higher education. As a result, many more people are trained in ways that would nominally qualify them for a variety of positions, including the very best ones. Organizations, assisted by the values held by the professions, have to organize their own sorting. As a result, the best jobs go to a few and less good jobs to many others across a large pool of possible candidates. The early opportunities provided to the former help them acquire other jobs later in their careers, bootstrapping not only their education, but also the rich prior work experience made possible by their formal education. Of course, those with less valued educational credentials could do so well with their somewhat less desirable entry level opportunities that they also attain the same mid-career place. These alternative trajectories present an empirical question about their relative likelihoods.

To a large extent, the hierarchy created in a setting where near universal educational access is encouraged and capacity is abundant is one based on prestige (see Caplow and McGee, 1958). Where the accomplishment of a university education is a relatively routine phenomenon, the more

appropriate question is the social value that is attached to the institution that performs the certification (Clark, 1986). In such a system, broad consensus about which schools are better, or perhaps more appropriately thought to be better, becomes necessary. With such agreement, academic degrees from more prestigious educational institutions have much more value to their holders (Davies and Guppy, 1997). This attribute should allow degree holders to command a higher value in the market place for talent, a feature that makes the competitive admission process in higher education more rational.

Properly functioning, a prestige-based hierarchy of post-secondary education has a merit-based logic that creates social support for its continuation. *Ceteris paribus*, those who graduate from high prestige schools were, several years earlier, selected over many others for enrollment. After that point, these individuals effectively competed against a high caliber student body. These students were made even better by exposure to a more talented faculty, who also were more likely to be attracted to high-prestige schools for similar reasons (Allison and Long, 1990). Thus the logic of prestige-based educational structures depends heavily upon an accumulative advantage system (see Merton, 1988). In such, small initial superiorities are used to justify subsequent decisions that in turn, create larger subsequent differences (see also Bentley and Blackburn, 1990). In essence, several judgments each of which are independently grounded in logic together constitute a self-fulfilling prophecy (Thomas, 1937).

Until recently, prestige differences in higher education could be considered “fuzzy sets,” about which only a loose consensus existed. Groups of schools were elevated (e.g., “Ivy League”) or depressed (e.g., non-flagship public schools often known as directional schools). Perhaps driven by the demand for more precise information, a ranking industry has emerged purporting to quantify educational quality in many ways and across various subsets of schools. This effort has proven especially prominent in business fields, perhaps because of the tendency of students in that field to focus upon extrinsic matters, and to demand what seems to be objective evidence of value for money.

Although the precise delineation of a pecking order among schools stretches credibility, the notion that the rankings taken collectively have loosely captured the brand capital of the formal educational process is reasonable. The fact that institutions of higher education are concerned about their rankings attests to their power and their believed influence on the important constituents of these organizations. For many, rankings exist as a scorecard that provides institutions with supposedly objective indications of the success of their efforts. Even if the methodology is not sufficiently scientific, their existence as a metric of perceived value is difficult to deny. Rankings are the classic example of “that which is believed is true in its consequences” (Thomas, 1937), and as a result has brought heightened attention to the calibration of educational capital.

In a world marked by rankings, more precise questions can be posed about particular occupations and the extent to which they tend to be dominated by those who attain certain types of educations. Rather than just generally acknowledge the usefulness of a particular level of credentials, rankings allow one to offer quantitative evidence on the extent that such credentials form the essential capital to further a career.

### **Research Propositions**

The base line question of this research is descriptive. If we assume that the CFO position is a worthwhile objective that many would pursue, we should quantify the level of educational capital that the winners of such a tournament possess.

The inquiry into CFO educational credentials does not necessarily comment upon the superior ability possessed by these people. Many of the business school rankings use the quality of student's academic abilities as a critical input (Safon, 2009; Fee et al., 2005). These exercises reason that better schools admit and matriculate students with superior abilities compared to schools that cannot attract large numbers of such students. Part of the ranking endeavor is therefore designed to make this sorting process objective and visible. However, academic ability and business acumen can be quite different. Many prominent and wealthy business leaders do not even possess college degrees (Reynolds et al., 2002). During the course of their education, students will have the opportunity to create friendships and ties with other highly talented students and faculty, leading to reserves of social capital that has been shown to enhance career prospects (Seibert et al., 2001). Thus, whether or not rankings can detect the existence of a superior educational process, the graduates of ranked programs might have their already somewhat superior human capital enhanced further in that they are collectively receiving a privileged special treatment.

A large number of CFOs hailing from highly ranked schools would suggest evidence consistent with the ranking enterprise, and its underlying meritocratic way of understanding the world. Many would say this result would suggest that the best students are selected for the best schools and are chosen by the best organizations. *Ceteris paribus*, their rise to the CFO position would be quite predictable. If CFOs do not tend to come from highly ranked schools, a less orderly world is suggested. Here, ultimate high placement in the working world may depend upon the capital acquired after formal education. Notwithstanding the somewhat better educational opportunities that well-positioned people might get in the aggregate, later career success to attain as high a level as CFO may be less predictable. Such a result would illustrate that an ample number of extremely competent students matriculate at all schools. The best interests of companies would be to find them and to facilitate their rise through the ranks, and for some to earn the CFO position. Diligence, political savvy and fortunate circumstances might not be disproportionately present in those who have matriculated at the best schools. In short, the distribution of this sort of success might be more of a firm-specific tournament, and much less predictable from generic educational credentials. This result might also suggest that the rankings of business schools contain less information and importance than they purport. The issue can be summarized as follows:

**RP<sub>1</sub>:** CFOs of publicly traded U.S. companies will be more likely to have attended ranked business schools than unranked business schools.

The second research proposition concerns the robustness of the general relationship between educational credentials and occupational positioning captured in RP<sub>1</sub>. Even if disproportionate educational capital is possessed by CFOs in the aggregate, this conclusion may be stronger for some types of organizations than for others.

An investigation of this notion needs to explore the nature of educational capital by suggesting that it has both functional and symbolic value. The former would have us believe that educational capital represents differential ability in performing the work of the CFO. The latter suggests that the value of educational capital relates to its reputational enhancing qualities. In other words, people who possess elite educational credentials tend to be perceived as more competent. Institutional theory can be used to separate the nature of the difference in value types.

Institutional theory has had a long and deep presence in the management and accounting literatures since the mid-1970s. Although subject to many stipulations and refinements, the essence

of the theory can easily be appreciated. In order to obtain legitimacy and social approval, organizations are incentivized to display features that are believed to closely align with social values and beliefs (Meyer and Rowan, 1977). This quest will cause organizations to resemble each other as they respond to similar environmental forces (DiMaggio and Powell, 1983). These tendencies will develop whether or not such attributes are economically rational or technically required (Tolbert and Zucker, 1983) because they impart a sense of propriety and lead to the attainment of social permission to act.

If symbolic displays are important to companies, they might extend to the educational credentials possessed by its key people. In short, the public might have more confidence in a company led by somebody with a Harvard degree than it would if led by somebody with a degree from a recently-formed online for-profit institution. Since the public cannot easily inspect the actual abilities of these two hypothetical leaders, the conventional wisdom would have us believe that the former person is more qualified than the latter. *Ceteris paribus*, the company that has executives with credentials from the “right” schools holds itself out to be a better company, as if they were the winner of a competition for the “best and brightest” executive talent. The company may also sincerely believe that better corporate outcomes will result from management by people with these personal credentials. This idea is built upon the foundational sociological premise that a reality exists above and beyond that which necessarily exists in the explicit awareness of individuals (Mills, 2000). Therefore, since the belief in these credentials transcend their actual value, we need not wonder how frequently educational credentials are actually observed by outside parties (see also Weber, 1946).

Among companies, reputation is the outcome of a competitive process. Firms seek to maximize their social status by signaling key characteristics to their constituents (Forbrun and Shanley, 1990). Although all companies want good CFOs, some companies may have the related but conceptually distinct need to convince others that they do have a good CFO. Companies that are led by people who conform to the common conceptions of leadership, and who inspire the confidence of constituents, are rarely questioned (see also Meindl et al., 1985).

Although all companies can be expected to be concerned with their reputations, large companies tend to be more often in the public eye. Their stock is widely traded, their presence is felt in many communities, and they tend to employ many people. With such a diverse constituency, such companies need to have great concern for their reputation in all ways. Smaller companies have less to prove and less to lose. As firms become distant from the center of media concern, they have more degrees of freedom about how they operate. *Ceteris paribus*, smaller firms are less visible. Less constrained by appearances and less concerned about reputation protection, smaller firms can focus on “the bottom line” and substantive rationality.

The second research proposition considers the prospect that the market for CFOs is not uniform. The educational capital of CFOs should be more valuable to firms with more salient reputational needs. There should be a stronger benefit to a large company in employing a CFO with the *imprimatur* of a degree from a well-recognized university.

A demonstration of firm differences would help us re-interpret evidence supportive of RP<sub>1</sub>. If students who are either intrinsically superior because of their ability to get into the better schools, or because they were made better by the superior education that they received at those schools, are more likely to become CFOs (as per RP<sub>1</sub>), they should be equally valued by large and small companies. If CFOs with brand name educational credentials are not equally present across the company size segments, something more subtle would seem to be at work. In other words, the

educational capital that is associated with obtaining the CFO position might be more essential for those in more visible positions. This expectation is captured as follows:

**RP<sub>2</sub>:** CFOs of the larger publicly traded U.S. companies will be more likely to have attended ranked business schools than CFOs from the smaller publicly traded U.S. companies.

Educational capital represents an important possession of a CFO aspirant. However, such people also possess other forms of capital. Importantly, people have had work experiences that collectively encourage the belief that they may possess the skills and knowledge necessary for the CFO position. This could be called work experience capital, and could be built in a variety of ways. These include previous employment inside or outside the company now employing a CFO. The former steepens the individual in company and industry specific know-how. The latter allows the hiring company to benefit from best practices developed by other companies and in other industries. High quality work experience might be judged more important than educational credentials.

The salience of work experience increases as people move through their career. *Ceteris paribus*, older people possess a wider and deeper set of relevant experiences. Along similar lines, those of more advanced age grow more distant from their formal educations. Thus, one would expect that experience overtakes education as the dominant capital at a certain point in a business person's life.

In essence, education and experience appear to be potentially alternative sources of capital. As an ideal type, one can imagine candidates that had an abundance of one, but a relative deficiency of the other. This prospect introduces the possible mitigation of brand name educational credentials. To see if this occurs, the fact that relevant work experience takes many years to accumulate allows the sample of CFOs to be distinguished according to age. If a considerable group of older CFOs do not have as strong an educational portfolio, they would seem to have substituted high levels of work experience capital for educational capital. In this regard, a caveat to that which was sought in the first Research Proposition would need to be acknowledged.

That attention to rankings has been a fairly recent phenomenon suggests that people have become more attentive to educational capital in recent years. The age-old trade off between formal education and high-caliber work experience may have tipped in favor of the former in recent times, as firms devote more resources to recruit and groom "the best and the brightest" from elite education programs (Binder, 2014; Riviera, 2015). Consistent with the modern tendency to believe in transcendent leadership qualities within corporations (Meindl et al., 1995), the reliance upon educational capital may be more often observed within more recent cohorts.

If educational capital "speaks for itself," those who possess high levels of it do not need an alternative form of capital such as deep work experience capital. These people should be able to attain high level corporate positions on the strength of their formal educational advantage alone. Alternatively, those lacking higher levels of educational capital have to also possess superlative work experience capital. The following research proposition summarizes the expectation in this area, with age proxying for collective work experience capital:

**RP<sub>3</sub>:** CFOs from ranked business schools will be younger than CFOs from unranked business schools when they attained their positions.

The previous research proposition used age to proxy for likely differences in work experience. This approach was predicated on the idea that many forms of work experience might contribute to a form of capital that would mitigate the importance of educational capital, in part by substituting for it. That logic is continued in the next research proposition.

Public accounting experience, particularly with a large international public accounting firm, may be very relevant work experience for CFOs. Most would say that this intense nexus of professional activity (see Abbott, 1988) exceeds the substantive value of an advanced degree, steeped as it is in the “real world” of finance and accounting. Whereas it would be easy to say that both experience of this sort and a strong academic education provide unique value, and that the ideal CFO would have both, an empirical question is posed by their potential opposition. As with RP<sub>3</sub>, we need to consider specific alternatives when considering the true value of advanced education at an elite school. To the extent that relevant work experience and advanced education are different credentialing paths to the CFO position, an alternative currency might exist for individuals as they attempt to advance their careers. The fourth research proposition concerns the relationship between public accounting experience and the possession of premium educational capital among current CFOs.

The consideration of one form of work experience as a prerequisite for another requires an appreciation for conventional career paths. Public accounting has long been a high volume entry-level employer, recruiting students from heterogeneous educational backgrounds (AICPA, 1988). Historically, students were taken from schools at many points in the educational institution status hierarchy.<sup>1</sup> Subsequent turnover has always been very high for a variety of reasons (Doll, 1983; Dillard and Ferris, 1979). Accordingly, people trained by public accounting are quite available for mid-level corporate employments, often being brought into corporations to supervise individuals who had been hired at the entry-level. Public accounting work experience tends to be valued in part because of its breadth and for its depth. As suggested by Abbott (1988), the public practice of any profession tends to be the best crucible of knowledge elaboration. Nonetheless, the open question is whether this particular form of experience can substitute for deficiencies in educational capital. If the CFO ranks include a considerable number of those with public accounting experience, but without brand name educational credentials, evidence of the complementary nature of these forms of capital would be produced. This prospect could be captured formally as follows:

**RP<sub>4</sub>:** CFOs from ranked business schools are less likely to have high quality public accounting work experience than are CFOs from unranked business schools.

In sum, four testable research propositions are proposed. The first attempts to establish the basic prevalence of higher forms of educational capital with a test of its presence within the CFO ranks. The second can be interpreted as an effort to particularize its domain, expecting stronger operation within larger companies. The last two questions introduce alternative forms of capital for CFOs, first with a general test of aggregated work experience capital, proxied by CFO age, and

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<sup>1</sup> In recent years, public accounting firms have narrowed their recruiting efforts. Sustained on-campus recruiting efforts are usually reserved for core schools where the firm has had success before or are advocated for by key insiders. Students from other schools are at a major disadvantage. Since they must send their materials in, they tend to be given limited attention (see Rivera, 2015).

second with a specific test for one particular type of work experience (i.e., public accounting work history).

### THE STUDY

The Russell 3000 is a broad listing of the leading publicly traded companies, covering approximately 98% of the investable US equity market (Russell.com, 2011). This source was used to define the sample of firms where CFOs might be employed. Within the Russell 3000, the list of S&P 500 corporations was also obtained. These companies constitute the largest publicly traded companies in the sample, as needed for RP<sub>2</sub>. This largest company group covers approximately 75% of the assets of the US equity market (Standardandpoors.com, 2011).

Data was collected on CFOs from approximately 2300 companies listed on the Russell 3000 index. For these purposes, the top financial executive sometimes had a title other than CFO (e.g., Chief Accounting Officer, Vice President – Accounting). In many situations, the identity of the head accounting person was difficult to ascertain from these titles. In those cases, more than one individual per company sometimes was included.<sup>2</sup>

Educational background and demographic information for each company's accounting executive was retrieved from the BoardEx database (Boardex.com, 2011). The resulting data comprised a sample of 3166 individuals from 2290 companies. Data was lost when companies did not list an individual with a title that clearly suggested primarily accounting responsibilities.

The first research proposition requires that the educational capital of CFOs be compared to that of a similar group. The distribution of CFOs was benchmarked against the population of CPA exam takers during 2009, the last year for which data was available. CPA exam takers would seem to be a rigorous comparison group, since it eliminates accounting majors without serious vocational abilities and without appropriate career aspirations. Nonetheless, since CFOs do not have to be formally trained in accounting, this is not a perfect comparison sample. The educational backgrounds of CPA exam takers were extracted from NASBA (2010). For these purposes, only first time exam takers were considered, since they tend to represent the most able candidates. We also recognize that we are assuming that 2010 was a typical year for the movement of accounting majors towards certification.

We employed the 2010 rankings from *US News and World Report*, *Business Week* (undergraduate and graduate), *Financial Times* and the *Public Accounting Review* to code the educational background of each individual CFO for comparison group member. A school was coded as being a ranked school if it appeared in the top 50 schools named by at least one of these lists. This produced a total of 139 different schools, suggesting a good deal of variation in what these various rankings attempted to measure. This approach provides the least demanding application of the rankings, and was meant to bypass the need to confront how specific rankings were constructed. In instances where an individual possessed degrees from multiple schools, we required only one of the schools to be ranked for the person to be coded as possessing a ranked school educational background.

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<sup>2</sup> The term "CFO" is used to refer to the group of people identified as very high ranking accounting executives. We acknowledge that all people in the sample are not CFOs, but found it convenient to refer to them collectively with this title.

Age upon becoming CFO was the key measure needed for Research Proposition 3. The BoardEx database was less complete with regards to this data item. Nonetheless, the age of approximately 90% (2880) of the initial group of individuals was obtained. Although age is a continuous variable, treatment of it as such would probably overstate the consequential variation. Therefore the age upon becoming CFO data was grouped into four quartiles separating people who were in their 30s, 40s, 50s and 60s (or higher). Often, CFO age when that person was hired as CFO had to be computed (current age – years in post) This also entailed some data loss, but left 1999 observations (63%).

The BoardEx data also summarizes the salient work experience of key corporate officials such as the CFOs. For these purposes, previous employment by one of the international public accounting firms<sup>3</sup> was first distinguished from its absence. This distinction reflects the fact that the accounting profession has always placed a premium on the training and work experiences provided by the large firms (Stevens, 1981; Fogarty, 1992). This measurement choice was made more robust by also evaluating CFOs with any public accounting experience, thereby capturing previous employment with the large regional or local firms.

## RESULTS

### Descriptive Information

Table 1 provides factual data about the individuals in the study. This array provides additional information on the demographic descriptions of the CFOs. The CFOs of the companies

**TABLE 1**

### Demographic and Organizational Description of CFO Sample

	<u>Count</u>	<u>Percentage</u>
Gender		
Male	402	12.7%
Female	<u>2,764</u>	<u>87.3%</u>
Total	<u>3,166</u>	<u>100.0%</u>
Current Age (years)		
30-44	732	25.4%
45-49	726	25.2%
50-54	773	26.8%
> 54	<u>649</u>	<u>22.5%</u>
Total	<u>2,880</u>	<u>100.0%</u>
	<u>Mean</u>	<u>Std. Dev.</u>
Current Age (years)	49.3	6.71
Age becoming CFO	43.2	
Tenure (years)	3.47 *	

\*Failure to tally caused by missing age data for 276 cases.

<sup>3</sup> For these purposes, the international firms are defined to constitute the current “Big 4” firms (Deloitte, Ernst & Young, KPMG, PwC), their predecessor organizations (e.g., Arthur Young, Coopers Lybrand) and Arthur Andersen.

in this sample tend to be male (87.3%). The CFOs were slightly less than 50 years old (average = 49.3) when the data was captured. Although age ranged widely from 30 to 71 years, a narrow standard deviation (6.71) existed. On average, people became CFOs at age 43.2 (standard deviation = 12.35). Slightly less than 23% of the CFOs worked for the S&P 500 organizations, defined as the larger companies in this research.

Table 2 describes the educational backgrounds of the CFOs in the sample. Almost 97% of the CFOs have at least a bachelor's degree. Of these people, almost 47% had graduate degrees.

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**TABLE 2**

**Description of Education and Work Experience of CFO Sample**

	<u>Count</u>	<u>Percentage</u>
Education Level (of 3,166 subjects)		
Doctorate/JD	61	1.9%
Masters	1,421	44.9%
Bachelors	3,067	96.9%
Type Schools Attended		
Ranked	139	17.0%
Unranked	<u>680</u>	<u>83.0%</u>
Total	<u>819</u>	<u>100.0%</u>
Work Experience		
Large International Firms	1,469	46.4%
National & Regional Firms	25	0.8%
Other CPA Firms	686	21.7%
No Public Accounting	<u>986</u>	<u>31.1%</u>
Total	<u>3,166</u>	<u>100.0%</u>
Company Size		
S&P 500	725	22.9%
Other Russell 3000	<u>2,441</u>	<u>77.1%</u>
Total	<u>3,166</u>	<u>100.0%</u>
School Size		
Ranked schools		
Large > 10,000 students	101	12.3%
Small < 10,000 students	<u>38</u>	<u>4.6%</u>
sub-total	<u>139</u>	<u>17.0%</u>
Unranked schools		
Large > 10,000 students	178	21.7%
Small < 10,000 students	<u>502</u>	<u>61.3%</u>
sub-total	<u>680</u>	<u>83.0%</u>
Total	<u>819</u>	<u>100.0%</u>

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CFOs in the study attended 819 different colleges and universities, 680 of which (83.0%) are unranked. Nearly two-thirds of the CFOs (65.9%) matriculated at schools with fewer than 10,000 students. Table 2 also provides information about the prior work experience of the CFOs. Whereas nearly 47% had international accounting firm experience, over two thirds (68.9%) had some public accounting work experience.

### Research Proposition Evaluation

The first research proposition suggests that CFOs of publicly traded companies are quite likely to come from ranked schools. Table 3 shows that 1926 CFOs (61%) of the 3166 CFOs received a degree from a ranked school. To evaluate whether this is disproportionate, we compare it to the distribution of the “best and brightest” accounting graduates. The CFO result should be contrasted with the 31% of the 2009 CPA candidates who have degrees from those schools. The Chi-square coefficient of this difference is 1150.419;  $df = 1$  (significant at  $p < .01$ ). This finding supports  $RP_1$ . The education capital of CFOs tends to be disproportionately high.

The 1,926 CFOs from ranked schools came from 139 different institutions, which is a mean rate of approximately 14 CFOs per school. The 1,240 CFOs (39%) who held degrees from unranked schools came from the 680 unranked schools, which is a mean rate of less than two CFOs per unranked school. Although this disproportionality is striking, one cannot make strict conclusions about the odds of becoming a CFO without taking school size into account.<sup>4</sup> From Table 2, CFOs from ranked schools are disproportionately from larger schools (72.7%) and those from unranked schools tend to be from smaller schools (73.8%).

The ranked versus unranked school distinction at the heart of  $RP_1$  tends to underestimate the concentration in the educational backgrounds of CFOs. Of the 1,926 CFOs from 139 ranked schools, 274 CFOs graduated from just 7 schools.<sup>5</sup> In other words, nearly 14% of the sample graduated from 5% of the ranked schools (and 0.85% of all schools).

**TABLE 3**

#### Distribution of CFOs by Type of School Benchmarked Against a Comparison Group

<u>Group</u>	<u>Ranked</u>	<u>Percent</u>	<u>Unranked</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
CPA Candidates	8,565	31%	19,297	69%	27,862	100%
CFOs	1,926	61%	1,240	39%	3,166	100%

Chi-square = 1,150.409;  $df = 1$ ;  $p < 0.001$  (2-sided)

<sup>4</sup> Notwithstanding many exceptions to the contrary, ranked schools tend to be larger than unranked schools. If accounting programs were proportionate to university size, this would alter the relative odds of a person becoming a CFO. Schools with unranked programs have an average of 9,889 students, whereas those with ranked programs average 21,801 students. This compresses the odds reported in the text.

<sup>5</sup> These schools, listed in decreasing order of representation in the data were: Michigan, Brigham Young, Penn State, Southern California, Indiana, Notre Dame and Illinois. These schools produce an average 39.1 CFOs per school. If these schools were eliminated, the average CFOs per remaining ranked school decreases to 12.2.

In sum, the evidence aligns with the acceptance of RP<sub>1</sub>. CFOs, as a group, have amassed impressive brand name educational capital, insofar as they tend to come from schools that have been recognized as possessing distinctive quality by the media.

The second research proposition expected that CFOs of the larger corporations in the dataset are more likely to possess brand name capital than are CFOs from the smaller publicly traded companies. The test of this proposition required the split of the sample between S&P 500 companies and the remaining public companies. This division distinguishes the CFOs from the largest of the large companies. The results show that over 65% of the CFOs from the S&P 500 firms attended a ranked school. This can be contrasted with the 59% of CFOs employed by the other publicly traded firms. As shown in Table 4, the difference is significant (Chi-square = 8.154;  $df=1$ ;  $p < .01$ ).

In sum, the results support RP<sub>2</sub>. The larger companies prefer CFOs with more educational capital, even within a universe of large companies. This finding furthers our appreciation developed in RP<sub>1</sub> that noted the disproportionality of brand name educational credentials among publicly traded company CFOs as a group.

The third research proposition anticipated that CFOs who attended ranked education programs were younger on average when they attained their positions than those who lacked this advantage. This expectation allowed what could be called work experience capital to gain recognition as an alternative CFO credential. This research proposition reasoned that since work experience capital would take longer to accumulate towards the individual CFO's advantage, its distribution would allow us to better appreciate the singular value of educational capital for younger CFOs.

Table 5 uses CFO age upon ascendency to the CFO position. This measure offers a better representation of how capital was viewed in the job market. For CFOs from both ranked and unranked schools, the modal age grouping during which they acquired their positions was the 40s. A lower percentage of the CFOs from ranked schools made the grade in their 30s than did CFOs from unranked schools. Contrary to expectations, CFOs from ranked educational programs do not get hired at earlier ages than those with unranked school credentials (Chi-square = 6.313;  $df=3$ ;  $p > .05$ ). This conclusion was also reached when a non-parametric analysis, using the Mann-Whitney test, was used for the current age ( $U = 963435$ .  $P = 0.40$ ). These findings suggest that a degree from a ranked school does not function as a guarantee of a career "fast track." In other words, educational credentials by themselves are not adequate to secure this choice position. The accumulation of

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**TABLE 4**

**CFOs Attending Ranked School by Company Size**

<u>Firm Size</u>	<u>Ranked</u>	<u>Percent</u>	<u>Unranked</u>	<u>Percent</u>	<u>Total</u>	<u>Percent</u>
S&P 500	474	65.4%	251	34.6%	725	100%
Other Russell 3000*	<u>1,452</u>	59.5%	<u>989</u>	40.5%	<u>2,441</u>	100%
Total	<u>1,926</u>		<u>1,240</u>		<u>3,166</u>	

Chi-square = 1,150.409;  $df=1$ ;  $p<0.001$  (2-sided)

\* This excludes the S&P 500 companies.

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relevant career experiences might be necessary for all CFO candidates. The third research proposition is not supported. Educational capital does not overpower work experience capital.

The fourth and final research proposition examines the possibility that public accounting experience may substitute for the individual's investment in higher levels of education capital. Table 6 Panel A considers the specific question of whether CFOs from ranked and unranked schools have similar levels of relevant previous work experience, by distinguishing those possessing international public accounting firm experience. These results show that most (50.5%) of the CFOs from unranked school backgrounds have international firms public accounting experience. This tendency is not true of the CFOs from ranked schools, where those with this type of experience are in the minority (45.1%). The difference is significant (Chi-square = 8.80;  $df = 1$ ;  $p < .01$ ).

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**TABLE 5**

**CFO Educational Background Distributed by CFO Age at Hire**

Age Group (years)	Ranked		Unranked		Total	
30-39	339	(26.8)%	230	(31.3)%	569	(28.5)%
40-49	522	(41.3)%	302	(41.0)%	824	(41.2)%
50-59	374	(29.6)%	193	(26.2)%	567	(28.4)%
>59	28	(2.2)%	11	(1.5)%	39	(2.0)%
Total	<u>1,263</u>	<u>(100.0)%</u>	<u>736</u>	<u>(100.0)%</u>	<u>1,999</u>	<u>(100.0)%</u>

Chi-square = 6.313;  $df = 3$ ;  $p = 0.097$

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**TABLE 6**

**Distribution of CFO by Work Experience and Educational Differences**

Panel A: Considering only Large Firm Work Experience

Public Accounting Work

Experience	Ranked School		Unranked School		Total	
International Firms	868	(45.1)%	626	(50.5)%	1,494	(47.2)%
No International Firms	<u>1,058</u>	<u>(54.9)%</u>	<u>614</u>	<u>(49.5)%</u>	<u>1,672</u>	<u>(52.8)%</u>
Total	<u>1,926</u>	<u>(100.0)%</u>	<u>1,240</u>	<u>(100.0)%</u>	<u>3,166</u>	<u>(100.0)%</u>

Chi-square = 8.880;  $df = 1$ ;  $p = .003$  (2-sided)

Panel B: Considering All Types of Public Accounting Work Experience

Public Accounting Work

Experience	Ranked School		Unranked School		Total	
International Firms	851	(44.2)%	618	(49.8)%	1,469	(46.4)%
Other Accounting Firms	386	(20.0)%	325	(26.2)%	711	(22.5)%
None	<u>689</u>	<u>(35.8)%</u>	<u>297</u>	<u>(24.0)%</u>	<u>986</u>	<u>(31.1)%</u>
Total	<u>1,926</u>	<u>(100.0)%</u>	<u>1,240</u>	<u>(100.0)%</u>	<u>3,166</u>	<u>(100.0)%</u>

Chi-square = 51.826;  $df = 2$ ;  $p = .000$  (2-sided)

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Panel B of Table 6 revisits the nature of accounting work experience by introducing a third category, accounting experience other than with an international firm. Most of these individuals practiced with local firms.<sup>6</sup> This new group formed a larger percentage of those from unranked schools (26.2%) than it did from ranked schools (20.0%). The overall relationship between type of accounting work experience (including none) and educational capital type is significant (Chi-square = 51.826;  $df = 2$ ;  $p < .01$ ).

In sum, the evidence supports RP<sub>4</sub>. Public accounting work experience, measured as either large firm experience or as any experience, tends to be an alternative form of human capital for CFOs. Those without higher levels of educational capital can use this particular form of work experience capital to further the likelihood of their attainment of CFO positions.

## DISCUSSION

This paper shows that publicly traded companies are more likely to hire CFOs with more brand name educational credentials. This result should be a surprise to few because it can be supported by quite different rationales. CFOs from ranked schools may be more competent and well deserving of their positions. Alternatively, such educational credentials may serve to create the needed opportunities to be successful at this level that are not uniformly provided to others, notwithstanding their abilities and merit. Whatever its exact meaning, the caliber of educational capital appears to be very important to those who would be CFOs.

The findings of this research also support the association between the size of the company and the existence of brand name educational credentials. That CFOs tend to hail from ranked schools is less true for the merely large companies that are less often in the public's vision than the very large and very visible companies. The value given to educational capital seems to differ in these two environments. To the extent that this is true, an additional return to education may exist. The importance of having a brand name credential clearly lies in allowing its possessors to be deemed more capable or more intelligent. However, within organizations with stronger reputational needs, the same educational capital achieves a dividend based on its proper fit on a symbolic basis.

The consideration of the last two research questions further explores the power of premium educational credentials by introducing other ideas about the merit that CFO candidates might possess. The third proposition allowed one to consider if a degree from a ranked school would speed the time to the rank of CFO. The evidence did not strongly support this proposition. Apparently, time in rank still matters. Apparently, an education from a better-than-average school is not a magic bullet. Nor does such a credential act as a speedy guarantee of, as they used to say, a key to the Executive Washroom, and now say, the C-Suite. Here, age can be taken as a proxy for the opportunity to develop work experience capital. The results endorse the value of such, even in an environment very receptive to those who possess an educational pedigree.

The idea that CFOs with public accounting experience are uniquely well qualified to become CFOs, even if they have not earned a premier degree, provided another means to consider the true value of educational imprimatur. We reasoned that those CFOs with this particularly relevant form of work experience capital might be able to overcome the handicap of not having the strongest form

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<sup>6</sup> Surprisingly few ( $N = 25$ ) of the CFOs had work experience with the national public accounting firms sometimes referred to as "Tier Two" firms such as Grant Thornton and BDO Seidman. This made it inappropriate to create a special category between international firms and local firms. Had such been done the distribution of people over types of schools would also have been significant (Chi-square = 53.87  $p < .001$ ).

of educational capital. In other words, specific work experience might be an alternative criterion of merit. This research offers results that indicate that CFOs with such valuable work experiences were less likely to graduate from ranked schools. More generally, the existence of such a large number of CFOs with large firm public accounting work experience suggests that it is a valued credential for CFOs. Whereas all CFOs must have a record of solid work experience (from the third research proposition), specific accounting experience serves to differentially assist those that lack the best educational credentials. But perhaps more importantly is the converse conclusion that CFOs with degrees from those schools thought to be best did not need this test of high quality work experience.<sup>7</sup>

This research provides evidence of the value or importance of a degree from a top business school based upon an analysis of the educational background of current CFOs. As such, the paper sheds light on the reasonableness of expectations that students, matriculating at all points of the U.S. educational institutional hierarchy, should hold. If we assume that the well-paid CFO position is a worthwhile aspiration for finance and accounting majors, we should understand how important a premier education can be to its attainment. For aspiring CFOs, where a person goes to school matters. Although people with lesser educational credentials are capable of many fine accomplishments, they tend not to become CFOs of publicly traded companies with the same frequency. If one had to choose between the extreme belief that education did not matter, and the extreme belief that there is a perfect relationship between education and reward, one would be seriously tempted by the latter. Then again, the strength of this association varies in different sectors of the executive job market. The larger the company, the more important an elite education is toward the attainment of key positions.

The reputational needs of companies should not be treated as a constant. Many studies have suggested that the institutional environment changes over time (Powell, 1985; Zucker, 1988). Most of this work would have us believe that the direction of this change would be away from that which makes strict economic sense to that which makes symbolic sense (Orri et al., 1991). In other words, the environment could be expected to become increasingly institutionalized. This trajectory means that reputation should become an increasingly important resource, and may extend to those employees who become the human face of large organizations. This research, using ranking from only one year, under-represented the change that also exists in what the labor market considers premium educational capital. Future research would be needed to better demonstrate the nature of this change over time.

The results of this research include a demonstration of the value of accounting as a pathway of occupational mobility. If one is not fortunate enough to have attended a highly regarded school, the CFO position is still within reach to those who make good decisions within public accounting firms. Future research on accounting careers needs to illustrate what these post-graduate post-certification decisions might be. We also need work on the influence of CFO credentials on performance evaluation (see Quinn and Steward, 2012).

This paper took the incumbents of the CFO position as a given. Future research might include studies better able to evaluate why specific individuals got these jobs. Here, experimental

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<sup>7</sup> Among the large companies that have CFOs without accounting work experience are Disney, Amazon and Time-Warner Cable. These CFOs primarily possess finance backgrounds. Although accounting expertise must exist in these companies, most likely close to its apex, the fact that the CFO comes from finance suggests the financialization of the economy suggested by many best sellers and academics such as Zorn (2004).

methods would be useful to achieve better control over varying degrees of education and work experience for hypothetical CFO candidates.

The propositions that were tested were strictly limited by the measures that were used to operationalize the concepts. As such, future research needs to be conducted that uses alternative measure of variables such as prestigious educational attainment. For example, a much more restrictive conception of top programs also might be very revealing. The current research does not require a strong belief in the school rating process since it only uses the fact of being ranked as opposed to the rank assigned. More restrictive definitions of ranked schools would make it more difficult to accept the first research proposition. Several of the measures used by this research could be considered cross-sectional “snap shots” of phenomenon that have dynamic elements. For example, rankings change over time and such has not been taken into account by this research. Therefore, a limitation should be recognized. Along similar lines, we benchmarked the distribution of CFO education credentials with a single year’s CPA candidate pool. Such a group could also change through time, even if such could probably only modestly alter that which we took from it. Future studies, more aimed at who becomes a CFO should use a broader base of educational credential possibilities. For present purposes, another limitation pertaining to the data is appropriate. Finally, as business school rankings continue to expand beyond the U.S, exploring ways to incorporate the social esteem of non-domestic institutions would seem worthwhile. Further research should also address the work experience capital construct. Here, age at CFO hiring did not prove to be a successful proxy for non-public accounting occupational experiences. We also cannot be sure that the age of a person when they took their current position was the first CFO position that they have held, a problem that may have understated this variable. More qualitative work history distinctions apparently are needed.

Perhaps because the purpose of this paper is to make a hidden reality more visible through empirical analysis, strong suggestions for the parties involved are not possible. Whether the ranking of schools is a socially constructed reality or not, it seems to confer potential benefits upon the graduates of the anointed programs as they move through the job market. Students in other programs should realize that the playing field is not level and works against them as it pertains to the continuing assessment of their educational capital. These students would be well-advised to invest in alternative forms of capital that also have job market credibility. As shown by this paper’s results, high caliber public accounting work experience would qualify for that purpose. Nonetheless, one should never forget the wisdom in the adage “Many are called, but few are chosen.”

## REFERENCES

- Abbott, A. 1988. *The System of Professions*, (Chicago, University of Chicago Press).
- Allison, P., and J. Long. 1990. Departmental Effects on Scientific Productivity. *American Sociological Review* (Vol. 55) 463-478.
- American Institute of Certified Public Accountants (AICPA). 1988. *Supply of Accounting Graduates and the Demand for Public Accounting Recruits*. (New York, AICPA).
- Bartel, K., and S. Jackson. 1929. Top Management and Innovation in Banking: Does the Composition of the Top Team Make a Difference? *Strategic Management Journal* (Vol.10) 107-124.
- Bentley, R., and R. Blackburn. 1990. Changes in Academic Research Performance over Time: A Study of Institutional Accumulated Advantages. *Research in Higher Education* (Vol. 31) 327-345.

- Binder, A. 2014. Why Are Harvard Grads Still Flocking to Wall Street? *Washington Monthly* (September/October) 7-8.
- Boardex.com. 2012. *Relationship capital management*. <http://www.boardex.com>.
- Caplow, T., and R. McGee. 1958. *The Academic Marketplace* (New York, Basic Books).
- Clark, B. 1986. *The Higher Education System: Academic Organization in Cross-National Perspective*. (Berkeley, University of California Press).
- Davies, S., and N. Guppy. 1997. Fields of Study, College Selectivity, and Student Inequalities in Higher Education. *Social Forces* (Vol. 75) 1417-1438.
- Dillard, J., and K. Ferris. 1979. Sources of Professional Staff Turnover in Public Accounting Firms: Some Further Evidence. *Accounting, Organizations and Society* (Vol. 4) 79-186.
- DiMaggio, P., and W. Powell. 1983. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review* (Vol. 42) 113-123.
- Doll, B. 1983. Staff Turnover: How to Manage It. *Journal of Accountancy* (December) 156-176.
- Fee, E., C. Hadlock, and J. Pierce. 2005. Business School Rankings and Business School Deans: A Study of Nonprofit Governance. *Financial Management* (Vol.34) 143-166.
- Feuer, M., and K. Fulton. 1994. Educational Testing Abroad and Lesson for the US. *Educational Measurement Issues and Practices* (Vol.13) 31-40.
- Fogarty, T. 1992. Organizational Socialization in Accounting Firms: A Theoretical Framework and Agenda for Future Research. *Accounting, Organizations and Society* (Vol. 17) 129-149.
- Forbrun, C., and M. Shanley. 1990. What's in a Name? Reputation Building and Corporate Strategy. *Academy of Management Journal* (Vol. 33) 233-256.
- Iyer, V., E. Bamber, and R. Barefield. 1997. Identification of Accounting Firm Alumni with Their Former Firm: Antecedents and Outcomes. *Accounting, Organizations and Society* (Vol. 26) 315-336.
- Jalbert, T., R. Rao, and M. Jalbert. 2002. Does School Matter? An Empirical Analysis of CEO Education, Compensation and Firm Performance. *International Business and Economic Research Journal* (Vol. 1) 83-98.
- Johnson, K. 2015. Chief Accountants are Adding Up. *Wall Street Journal*, August 25, B5.
- Meindl, J., S. Ehrlich, and J. Dukerich. 1985. The Romance of Leadership. *Administrative Science Quarterly* (Vol. 30) 78-102.
- Merton, R. 1988. The Matthews Effect in Science, II. *ISIS* (Vol.79) 606-623.
- Meyer, J., and B. Rowan. 1977. Institutional Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology* (Vol.83) 340-361.
- Mills, C.W., 2000. *The Sociological Imagination*. (London: Oxford University Press).
- National Association of State Boards of Accountancy (NASBA). 2010. *2010 Uniform CPA Examination Candidate Performance* (Nashville, NASBA).
- Orru, M., N. Biggart, and G. Hamilton. 1991. Organizational Isomorphism in East Asia, in W. Powell and P. DiMaggio (eds.) *The New Institutionalism in Organizational Analysis* (Chicago, University of Chicago Press).
- Powell, W. 1985. The Institutionalization of Rational Organizations. *Contemporary Sociology* (Vol. 14) 564-566.
- Quinn, M., and A. Stuart. 2012. Top 25 CFOs. *Wall Street Journal* (July 31) C1, C4.

- Reynolds, P. D., W. B. Gartner, P. G. Greene, L. W. Cox, and N. M. Carter. 2002. The Entrepreneur Next Door: Characteristics of Individuals Starting Companies in America: An Executive Summary of the Panel Study of Entrepreneurial Dynamics. *Available at SSRN 1262320*.
- Rivera, L. 2015. *Pedigree: How Elite Students Get Elite Jobs*. (Princeton, Princeton University Press).
- Russell 3000. [http://www.russell.com/indexes/data/fact\\_sheets/us/russell\\_3000\\_index.asp](http://www.russell.com/indexes/data/fact_sheets/us/russell_3000_index.asp) accessed 12/14/2011.
- Safon, V. 2009. Measuring the Reputation of Top US Business Schools: A MIMIC Modeling Approach. *Corporate Reputation Review* (Vol. 12) 204-228.
- Seibert, S., M. Kraimer, and R. Liden. 2001. A Social Capital Theory of Career Success. *Academy of Management Journal* (Vol. 44) 219-248.
- Standardandpoors.com <http://www.standardandpoors.com/indices/sp-500/en/us/?indexId=spusa-500-usduf--p-us-l--> accessed 12/14/2011.
- Stevens, M. 1981. *The Big Eight* (New York, Macmillan).
- Stevenson, H., and S. Y. Lee. 1997. *International Companies of Entrance and Exit Examinations: Japan, UK, France and Germany*. (Washington, ERIC).
- Thomas, W. I. 1937. *Primitive Behavior* (New York, McGraw Hill).
- Tolbert, P., and L. Zucker. 1983. Institutional Sources of Change in the Formal Structure of Organizations: The Diffusion of Civil Service Reform. *Administrative Science Quarterly* (Vol.28) 22-39.
- Weber, M. 1946. *Essays in Sociology* (Oxford, Oxford University Press).
- Willhite, J. 2012. Compensation Slows for CFOs. *Wall Street Journal*, July 10, B1-B4.
- Zorn, D. 2004. Here a Chief, There a Chief: The Rise of the CFO in the American Firm. *American Sociological Review* (Vol. 69) 345-364.
- Zucker, L. 1988. Where Do Institutional Patterns Come From? In *Institutional Patterns and Organizations* L. Zucker, (ed.) (Cambridge MA, Ballinger) 23-49.