

# CEO CAREERS AND STYLE \*

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## Abstract

This paper examines how early career experiences affect the career path and promotion of managers as well as the managerial style that they develop when becoming CEO. I differentiate between exogenous shocks to managers' careers such as the business cycle at starting date and endogenous choices of individuals such as the industry, type and size of firm that someone starts in. I show that the economic conditions at the beginning of a manager's career have lasting effects on the career path and the ultimate outcome as a CEO. CEOs who start in recessions tend to take longer time to become CEO, are more likely to rise through the ranks within a given firm rather than moving across firms and industries and ultimately end up as CEOs in smaller firms. Moreover, managers who start in recessions have more conservative management styles once they become CEOs. These managers have less leverage in the firm where they are CEOs, rely more on internal investments rather than acquisitions, have lower SG&A and higher ROA. Though it is endogenous, I also examine the impact of early career choices on career progression. I find that certain types of positions are associated with favorable long run outcome of the manager's careers: Starting in larger and public firms or in the banking industry is associated with faster time to CEO and becoming CEOs in a larger company.

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\*PRELIMINARY AND INCOMPLETE. PLEASE DO NOT CITE WITHOUT AUTHOR'S PERMISSION. MIT, CEPR and NBER. E-mail: aschoar@mit.edu. I thank seminar participants at the MIT Organizations lunch and the NBER corporate finance meetings for helpful comments. I also thank Randall Morck and Sendhil Mullainathan for insightful comments.

# I. Introduction

How do CEOs shape the strategy and performance of the companies they head? Recent papers provide evidence from large scale data sets that CEOs and other top managers have large person-specific heterogeneity in their management styles that are fixed over time, see Bertrand and Schoar (2003). These person specific styles explain a substantial fraction of the variation in firms' capital structures, investment decisions and organizational structure. The idea that CEOs greatly affect the performance and operations of the firms they head is corroborated by a large number of papers that have shown substantial changes in firm's stock price as well as accounting performance when a CEO, see for example Warner, Watts and Wruck (1989), Weisbach (1995), Perez-Gonzales (2006) or Bennedsen et al (2007). Similarly there is a large literature in management science that has looked at the role of CEOs, starting with Hambrick and Mason (1984) or Fligstein (1990).

However much less is known about the factors which shape a CEO's style and about what determines the evolution of a (future) CEO's career. I examine the importance of early labor market conditions: how does the quality of the managerial labor market when a CEO is young affect his or her career path and the management style? It is especially important to understand how these styles are formed over the course of the manager's career and how persistent they are, if indeed CEOs have fixed management styles that they bring to their companies. In a world where management styles are person specific, one important role of the executive labor market is to match managers with specific styles or skills to firms that are looking for that style. However, if the formation of managerial styles is path dependent, past conditions of the executive labor market can affect the supply of managers and the styles that are available in the market.

In this paper I examine the progression of managerial careers from the beginning of the first job to the ultimate promotion to CEO. I differentiate between exogenous shocks to managers' careers such as the business cycle at starting date and endogenous choices of individuals such as the industry, type and size of firm that someone starts in. A large literature in particular in the management sciences has looked at imprinting of early career experiences on managers long run

outcomes and strategies. However, the challenge in most of these papers is that the choices which managers make early on in their career might also be reflection of the quality and characteristics of the person. This makes it difficult to interpret the causal direction of the effect, since long run differences in the manager's career might not be influenced by the job the person had, but a function of the type of managers who select into this job. By looking at recessions I am able to identify an exogenous shock to managers careers that does not suffer from this omitted variable bias.

I first show that the economic conditions at the beginning of a manager's career have lasting effects on the manager's career path and the ultimate outcome as a CEO. Managers who start their careers in recessions tend to have a different career trajectory than those who start in economically prosperous periods. In the following I will call these "recession CEOs". CEOs who start in recessions tend to take longer time to become CEO, are more likely to rise through the ranks within a given firm rather than moving across firms and industries and ultimately end up as CEOs in smaller firms. To avoid endogenous selection of when a manager chooses to enter the labor market I instrument labor market entry as the manager's birth year plus 25 years, since this is the average age of starting the first position over the sample.

These results suggest that the initial conditions in the managerial labor market have persistent effects on the careers of managers. These results are similar to those found in the labor literature that employees who early on get on a fast track have persistently different promotion opportunities than those who do not. However, it is even more surprising in the context of the executive labor market that these effects are persistent along the career path of the CEO. These findings are consistent with the idea that executive labor markets are do not seem to perfectly separate out the overall economic conditions that a manager operates in from the talent of the manager, when evaluating a manager's performance. Therefore, managers who start in recession years might be penalized for the poor performance of their firm or division even if it is outside of the manager's influence and vice versa managers who start in boom years seem to be rewarded for the overall performance of the economy. This argument is related to the recent debate on the incentives that

board members have when making CEO appointments. For example Khurana (2002) suggests that board members are not necessarily looking to find the best candidate overall but to find a CEO who has shown success in his former firm. This could suggest that it is easier for boards to justify hiring a CEO who grew his firm rapidly rather than one who managed not to shrink when the rest of the industry was shrinking.

The approach in this paper is similar to the idea in Graham and Narasimhan (2005) who analyze whether CEOs who lived through the Great Depression had lower leverage levels going forward. Interestingly the authors find that leverage levels of depression CEOs drop in the aftermath but revert back to the original levels after a transition period. The difference to the current approach is that Graham and Narasimhan look at people who already were CEOs when the depression hit not managers who started their careers during the depression. In fact the juxtaposition of the two results seems to reconfirm the idea that managers' style are relatively fixed once they become CEOs but are molded at the beginning of their career.

Recessions do not just affect career paths. The second finding is that recession CEOs also have very different management styles. I look at the financing and investment choices of the firm where a given manager becomes CEO as a function of the manager's career start. I find that CEOs who start in a recession tend to have more conservative styles with regards to the financing and investment decisions they make when they are CEOs. These managers have less leverage in the firm where they are CEO, rely more on internal investments rather than acquisitions, have lower SG&A and higher ROA.

Though it is endogenous, I also examine the impact of early career choices on career progression. I find that the particular type of position a person starts in seems to predict the long run outcome of the manager's careers: Starting in larger and public firms or in the banking industry is associated with faster time to CEO and becoming CEOs in a larger company. In contrast managers who start in a consulting firm have a faster career trajectory to CEO than those who start in other industries but interestingly they become CEOs in smaller firms. These results are interesting but cannot be interpreted in the same directional way as the recession results since people of different

qualifications and types might be choosing those different career paths early on. Therefore these results should not be interpreted in a causal way. The position might not shape the person and their outcome, but people with particular skills might seek out these positions in order to put themselves into a position of greater skill. Moreover, in the context of the CEO labor market I find that the recession variable is much more important than initial career choices.

The rest of this paper is organized as follows. Section II provides a description of the different data sources that were used to construct the data set and discusses potential selection issues in the sampling framework for this study. Section III analyzes the effects of early career experiences such as recessions and characteristics of the first position on the career path of the managers. Section IV quantifies the importance of starting in a recession on the managers' styles at the time that they become CEOs. And finally Section V concludes.

## **II. Data Description and Sample Selection**

### **II.A. Data Construction**

The data for this paper come from a number of different sources. I start with the companies and CEOs who are included in the Executive Compensation database of Compustat between 1992 and 2005. For each of these CEOs I collect their career history from different sources that contain biographical information of the CEOs. Those are the Who's Who in Business and Industry, the Hoover's directories of Galen's biographies and the proxy filings of the company itself. This information allows me to compiled information on the career profile of the CEOs and their demographic characteristics. For each CEO I collect information on the different companies and non-business entities managers worked in over their careers, the position(s) a manager held within each of the firms and the dates at which the position was started and ended. In addition I have information on the managers' age, birth place, educational background, marital status, the year and school s/he graduated from as an undergraduate and any high level degree such as MBA, master or PhD. I also obtained information about whether the CEO ever was in the military, held a political office or a

position in academia. This data set is constructed at the CEO level so that I have one observation per person.

From these sources I found background information for over 3500 CEOs or about 65% of the CEOs in the sample. If I focus only on CEOs who have a continuous career profile, i.e. no major holes of more than 3 year at any point in the employment history, the sample drops to just under 3000 observations. I reran all regressions including the larger sample of CEOs with some missing data and the results are the same. In the paper I only report the limited and cleaner sample.

The descriptive statistics in Table 1 show that there is a large amount of mobility in the CEOs' career paths. The average CEO takes about 20 years to become a CEO, and is around 47 years old at the time of starting the first CEO position. He or she has been employed in three prior companies and has on average worked in at last two different industries before starting the current job. The average tenure in each of the prior jobs is 4.4 years. Note that these averages do not fully sum up to the average time to become CEO of 19 years, since a number of CEOs have non-business appointments at some point in their career, such as political office, non profits, associations etc. Finally, 20% of the CEOs have some prior experience in banking and the financial industry, 4% of the CEOs started out as a consultant and only 3% have either prior military experience or spent time in academia.

I then form a second data set where I merge the CEO characteristics and career profile with Compustat firm level data to obtain information about the type of firm the CEO heads. This results in a panel data set at the firm year level during the time that the CEO was in the office, as well as at least five year before the CEO came into office. By construction the dataset only contains CEOs who were at the help of their company in the years between 1992 and 2004. Include only CEOs who have been in their position at a firm for more than two years. For each firm-year I know the characteristics of the CEO who was in office at the time. I can then use this data set to estimate how certain conditions at the beginning of the CEO's career affect the management style of the CEOs when in office. Firm level data are not matched for any employment spells of a manager prior to getting into a CEO position.

## II.B. Sampling Strategy

A few words of caution about the sampling strategy in this paper are in order. First it is important to note that the sample selection is conditioning on managers who became CEOs at some point in their career between 1992 and 2005. One can argue that these are comparably successful managers in the first place. While this is a reasonable concern, there is still a substantial amount of cross sectional variation between firms, since public firms in the US vary largely in their size, pay level and other success metrics of the managers. Even among publicly listed US firms there are big differences between a Fortune 500 firm and a small traded firm with modest market capitalization. This gives me enough variation in CEO outcomes to differentiate between CEOs that had tremendous success in their careers and those that had more moderate outcomes. An alternative sampling strategy would be to look at the unconditional probabilities of selecting into the CEO position. For this purpose one would need to get data on the entire cohort of managers that started in a given year and follow their career path over time. The advantage of this sample would be that I would be able to analyze whether there are systematic factors that predict whether a given manager becomes a CEO or not. For example, one could answer whether managers who start in recessions are less likely to become CEOs in the first place. However, this data is prohibitively difficult to collect, for two reasons. First, there is no data base that identifies people who are starting as managers in a given year. More importantly, it would be very difficult to define the "population at risk", i.e. people entering the labor market who could become CEOs in the long run. One could for example focus on the set of people who finish an MBA degree, however, we see in the data that there is a substantial fraction of CEOs who do not have an MBA degree but rise to the top from many different positions, including technical and R&D positions, law degrees etc.

A second selection issue concerns the coverage of managers in sources like the Who's Who of Business and Industry and Galen's biographies. There might be a tendency for managers of larger and successful firms to be more likely included in the biographical sources. Moreover, those

CEOs might also be more willing to share information with the public. There is incomplete vita information for almost 45% of the individuals that are included in the ExecuComp database. To avoid systematic bias in the completeness of information due to selective disclosure from voluntary sources, we supplemented the data collection with biographical information from proxy filings. These sources allow us to reduce the number of managers for whom we have incomplete biographical information to less than 30%. Even after using a combination of these sources, there is indeed more systematic coverage for CEOs in larger firms, but there is no bias in the types of CEOs who are covered in later versus earlier years. It is reassuring that the composition of firms and managers who are covered over time does not seem to change much, since the tests in this paper rely on longitudinal variation across managers from different cohorts. If the type of firms that are covered was changing over time, the results could be hard wired. To alleviate concerns that differences in coverage across decades could affect the results, I include decade fixed effects in all regressions.

Finally, a different type of sampling biases could be pronounced for the cohort results, especially since the sampling strategy employed here is more likely to include CEOs in the later part of the sample, if they had very rapid ascensions to the CEO position. Managers who take a longer time to become a CEO will be dropped from the sample. since those that take longer to get to the CEO position will not have made it to this position by the time that the data was selected. To control for this bias I rerun all regressions (a) only for CEOs who had a "fast career", i.e. top 50% of the sample, in the early years of the sample as well as the later years of the sample. So we are comparing managers on a fast track to the CEO position across different time periods. However, one could be concerned that those CEOs are fundamentally different from the rest of the market. For that purpose, I conduct a second robustness check in (b) that is based on following all the CEOs in one cohort. (b) I only include CEOs that started career prior to 1985, and we repeat it for different time cut offs. The latter approach allows us to look at all CEOs within the older cohorts.

### **III. Changes in Career Paths over Time**

Before looking at managerial career paths as a function of specific experiences at the beginning

of a manager's career, I first analyze whether there are general time trends in how the career trajectories of CEOs changed over the last four decades. A general intuition from the executive labor market is that the careers of CEOs have become more active with more reliance on external hiring and movements across firms. See for example Parrino (1997), Zabojnik and Murphy (2004) or Frydman and Saks (2007).

For that purpose I estimate a regression of career characteristics on a linear time trend. Table 2 shows a number of interesting patterns over the last four decades. I first look at the average time that managers take to become CEOs. There are two ways to measure this effect. One is to calculate the time from the starting date of a manager's first job to the year that the manager became CEO in a company. The second is to look at the age at which managers become CEOs. For managers who were CEOs in multiple firms, I use the date of the first CEO position. I also estimated the regressions using the last CEO position and the results are virtually unchanged. Table 2 shows that managers are becoming CEOs earlier in their careers and at younger ages.

I then look at the structure of the career path of managers and their promotion to CEOs. Row 3 of Table 2 shows that managers in later cohorts are more likely to be hired from the outside since managers show a sharp increase in the amount of firms they are employed in before they become CEOs. Row 4 shows that on top of increased mobility across firms, CEOs also move more between industries in later decades of the sample. And finally the data shows that managers stay less time in a given job than managers who were CEOs in early periods, see row 5 of Table 2.

While there is more movement between industries and firms in later years of the sample, it is interesting to see that there is less mobility from non business jobs into CEO positions. The last two rows of Table 2 show that managers in later cohorts are less likely to have come from the military or academia. I also find that managers in later years are less likely to have had a government position (not reported). It might not be surprising that military and government as a starting point for CEOs has dropped, since the role of these institutions in the business has shrunk over the same time period.

### III.A. Recession Effects on Managerial Career Paths

In a first step I want to understand how the economic conditions at the time that a manager enters the labor market affect the type of career the person will have. The motivation behind this analysis is that early career experiences might have long lasting imprint on the manager's career outcomes and the ultimate success in business. In a second step I will then analyze if these early career experiences also affect the management style of the CEOs. As discussed above we need to keep in mind that the sample is constructed in such a way as to compare future CEOs who enter either in good or bad economic times. I will not be able to look at the likelihood that someone becomes a CEO in the first place since all individuals in my sample will be CEOs at some point in their career.

There is a widespread perception that early career experiences can shape a manager and might have lasting effect on his or her career. The challenge in testing the validity of these arguments is that career choices early in the life of a manager are not exogenous but depend on the person's skill, preferences and other unobservable characteristics. For example, Business week and other publications have annual rankings of the top 100 companies to start your career in and argue that starting at a consulting firm or an investment bank affects the career trajectory. However, this interpretation is very misleading, since obviously better employers are able to attract the best candidates from the start. So if we observe that employees in these companies receive more outside offers or fast promotion in their career it might not be a causal result of the experience people had in this particular firm but it is a result of the selection of the people who start at that firm. Similarly, we might not be surprised that managers who come from tech companies are more tech savvy, this is not necessarily the imprinting of the firm they started in but the selection into a specific firm.

However, one factor that is exogenous to the career choice of managers is the economic condition at the time that managers enter the labor market, since a person's birth date is largely exogenous to

their own life. One concern, however, is that smart individuals know that it could be more difficult to succeed when starting your career in a downturn and thus might try to postpone entering the labor market when the economy is down. In that case the most well informed and potentially smartest people would delay entering the market while the average employee still enters, which then would lead to selection effects. To avoid this type of adverse selection into the market, I will instrument a manager's career starting date with the person's birth year plus 25 year. This is based on the observation that the average person's starting date at his or her first job is at the age of 25. This strategy allows me to focus only on the exogenous part of a manager's starting conditions and not the endogenous choices he might have made in the timing of the career start.

In Table 3 I analyze a manager's career path as a function of the economic conditions at the time of labor market entry. For that purpose, I regress different measures of the shape of the career path on a dummy for whether there was a recession at the time of the manager's job market entry. The recession dummy is based on the NBER's recession dating database. I only code years that the economy is in a trough as a recession year. These years receive a 1 while all other years are coded as a zero, since those are moderate to medium expansion years. As discussed above, I instrument labor market entry with the average age at which managers enter the labor force, i.e. year of birth plus 25 years.

In columns 1 and 2 of Table 3 the dependent variable is the logarithm of the number of industries a manager was employed in over the career path before becoming CEO. The specification in column 1 controls only for decade fixed effects to account for any long run trends in the economic environment and the way CEO careers have evolved in the US. Therefore the variation in these regressions comes from comparing CEOs within a decade who started in a recession year versus a regular expansion year. In column 2 of Table 3 I rerun this specification but also control for the industry in which a CEO started the career, where industry effects are measured at the one digit level. The rationale for including an industry control is that different industries might vary in their propensity and speed of promoting people. This would be especially interesting if there were large differences in the types of industries that CEOs start in when there is a recession year. However,

our results show that the coefficient of interest on the recession dummy is almost unchanged when we include the industry fixed effect. This suggests that the selection into industries based on the economic conditions at the beginning of the career does not have a measurable effect on the career path.

I then look at the logarithm of the number of positions a person held before becoming a CEO for the first time, "Positions to CEO". CEOs who started in recession periods tend to go through fewer positions before becoming a CEO than those that start in a regular year. Again this result does not change when controlling for industry fixed effects in column 4. Finally, in column 5 I show that the average tenure within each position is higher for those people who start in recession years. The dependent variable "Average Tenure" is calculated as the number of years a manager stayed in a given position, averaged over all positions in his career prior to becoming CEO. And again in column 6 I repeat the regression controlling for industry fixed effects of the career start, which does not change the magnitude of the coefficient on recession. These results suggest that managers who are starting in recession times tend to rise within their organization and seem to have internal career tracks rather moving across firms. One interpretation of this result could be that it is difficult for outsiders to separate the quality of a manager from the overall market conditions. So people who start in worse economic times might find it more difficult to communicate their quality to the outside market since the firm is not growing. However, managers who start in boom times will have positive results even if they did not personally contribute a lot to the success of the firm. These managers might get more outside employment opportunities and therefore are able to move between firms.

I now want to understand whether the conditions during the CEO's first position not only affect the shape of the manager's career but also the ultimate outcome. For that purpose in Tables 4 and 5 I focus on two measures that can proxy for the success of the manager's career, the time that a manager takes to become CEO and the size of the firm in which he becomes a CEO, respectively. Column 4 of Table 4 regresses the time to become CEO on a recession dummy and decade fixed effects of the decade in which a manager was born. The results show that managers who start in

recession years take longer to become CEOs than non-recession CEOs. In Table 5 I repeat the exact same regression but using the size of the firm that a manager becomes CEO in as the dependent variables. Column 4 of Table 5 suggests that recession CEOs on average end up in smaller firms than managers who start in boom times.

I also analyze whether the type of firm or position that a manager starts in has long run implications for the manager's career. In Table 4 I therefore investigate whether the time to become CEO varies with the characteristics of the initial position. I focus on a few starting jobs that are usually considered high impact such as starting in the financial sector or starting in a consulting firm. Moreover, I look at the size of the firm that someone begins the career in and whether the firm is public or private. However, it is important to note that this second set of regressions is not as well identified as the recession effects, since managers can endogenously select to certain starting positions depending on some unobserved differences which might in turn also affect the CEO's long run career outcomes. So it is not possible to infer any direction of causality from these regressions, but it is still interesting to understand whether there are systematic differences in the career paths depending on the starting position that a manager had.

In Table 4 column 1 managers who start in public firms tend to take less time to become a CEO. The coefficient on the first public dummy is positive and significant. However, interestingly I find that managers in larger firms also take a longer time to become CEOs. Those CEOs who started in the banking industry on average reach the CEO position faster than people starting in industries outside of finance. And finally I also find a negative coefficient on the consulting dummy, in keeping with the idea that managers who start in consulting firms tend to be almost on a fast track to a top management position. However, it is interesting to contrast these results with the findings in Table 5, where I look at the size of the firm that a manager becomes CEO in as a function of the starting position. I measure firm size as the logarithm of sales in the year before the CEO starts the position in order to abstract from any decisions about firm size that are a function of the CEOs choices within the firm. I will interpret the size of the firm that someone runs as an indicator of the overall success of the manager's career. Columns 1 of Table 5 regresses the logarithm of sales on an

indicator whether the firm was public that the CEO started his or her career in controlling for year fixed effects. I find that CEOs who start in public firms tend to become CEOs in larger firms I do not include industry fixed effects in these regressions since firm characteristics such as the decision to be public can be correlated with the industry that someone is in. I also replicate the results including industry fixed effects and the results are qualitatively very similar to ones reported here. In column 2 of Table 5 I regress log of firm size at the time of taking the CEO position on the size of the firm that the CEO started the first job being in. Column 2 shows that CEOs who start in larger firms also end up as a CEO in a larger company. Similarly, when I look at the industry that a CEO starts in, I find that managers who start in the banking and financial sector become CEOs in larger firms, see column 3. In contrast, those managers who start in the consulting industry tend to become CEOs in smaller companies. But it is important to note that the last two results are not significant at conventional levels. As before when we put in all the characteristics at the same time together with the recession indicator we see that the recession dummy has the strongest and most significant effect.

Overall these results suggest that managers who start in recession years tend to have careers that progress within a given firm and are less likely to be promoted through moves across firms. Moreover, these early career effects have lasting effects on the ultimate outcome of a manager's career, since we see that these managers take longer to reach a CEO position and end up at smaller firms. These results are reminiscent of the literature on fast tracks in the labor literature.

### **III.B. Robustness Checks**

As discussed before, one concern with regard to the cohort results reported above is that some of the effect could be driven by the sample selection. This is particularly important for the results that managers who start in recessions have different career paths and longer time to become CEOs. We could imagine that there are two secular trends coinciding at the same time, since there were more recessions early on the century and our descriptive statistics show that over the last four

decades the nature of CEO careers and promotions has changed as well. While we tried to control for this problem by including decade fixed effects. Thus even if there is a time trend in how careers are changing we are only using the variation between recession and non-recession years within a decade.

However, since these results are at the core of our analysis we also try a battery of other robustness checks to verify that our findings are not driven spurious correlations and samples selection problems. The most important sample selection issues in this context is that managers who might take longer to become CEOs will not have had enough time to be a CEO if we focus on the later years of our data. Therefore, I use different sample cut offs such to alleviate the sample selection bias. The first approach is to include only CEOs who started their career prior to 1980, i.e. the start of the first position in business was prior to 1980. Using such an early cut off guarantees that each manager had at least 25 to start their first CEO position and thus the issue that managers have different speed of becoming CEOs is much less prominent here. The downside of this approach is that we are losing almost 40position before the age of 45 (50) in each cohort. Under this model we can compare managers with similar trajectories across time. While this allows us to get rid of the selection bias discussed above, it forces us to focus on a particular subset of managers, i.e. those that are fast rising starts. Independent of which of the two approaches I include I still find qualitatively very similar results.

#### **IV. Managerial Styles and Early Recessions**

The second major question the paper focuses on is the impact that early career experiences can have on the management style that a manager adopts even decades later when he or she becomes a CEO. This is a very ambitious test since we are asking whether early career experiences have a lasting imprint decades later when the person becomes a CEO, on average this would be 20 years after the CEO starts the first job. For example, we can ask whether managers who have their early career experiences during recessions have more conservative management styles than those who start in boom times. The idea is that these early experiences have such a lasting effect that

they translate into differences in firm level decision, even twenty years later when the average CEO starts his or her first job as CEO. This test is similar to the approach used by Bertrand and Schoar (2003) in using changes in observable outcomes at the firm as an indicator of the impact that the CEO has on the firm. However, we do not have to rely only on firm switchers in this regression since we can compare changes in the firm behavior when a manager with a recession background becomes CEO to managers that did not start in a recession.

To test this hypothesis I start with Compustat data for the years that a given CEO was at the helm of the firm. I then match the CEO's career history to the annual firm data for the time that a CEO is in that company. The firm level variables of interest are outcomes such as leverage, investment levels, ROA and SG&A. I regress firm outcomes on the CEO's career profile to test whether decisions vary systematically based on the CEOs profile. To account for fixed differences in outcomes at the firm level, in all regressions I control for the firm average level of the dependent variable over the entire sample period. This is equivalent to using a firm fixed effect regression.

The results from these tests are presented in Table 6. In column 1 I regress firm leverage during the year that the CEO was in the firm on a dummy for whether the CEO started in a recession year. I also control for year fixed effects during the years that the CEO was in that firm and the mean leverage level of the firm over the sample period. As before I also include decade fixed effects for the decade that the CEO entered the labor market to control for any long run trends in management styles and economic conditions. The variation in these regressions comes from the differences in firm outcomes between CEOs who started in a boom versus a recession time within a given decade. Column 1 shows that leverage levels are significantly lower for firms whose managers started in a recession compared to those that started in a boom period. Recession CEOs lower the leverage ratio by almost 2% relative to other CEOs. In column 2 I repeat this regression but include other firm level controls such as fixed effects for the industry that a CEO started the career in and a dummy for whether the first job was in a public company. I include those controls to test whether the recession directly affects the management style of a CEO or whether other decisions at the start of the manager's career dominate the long run style effects. One could be

concerned that the recession dummy does not directly affect the management style but influences the manager through the choices that are made early on the career. For example, managers who start in recessions might find it more difficult to find a job in a public company or might not be able to find jobs in the most attractive industries. If that was true the result of the recession dummy should drop and become insignificant when we include other observable characteristics of the manager's career start. However, the results in column 2 show that the coefficient on the recession dummy is unchanged when including those additional controls. I replicated the same results using interest coverage as the measure of leverage and find the same results.

In columns 3 and 4 of Table 6 I then rerun the same specifications for the level of investments as the independent variable. Managers who start in recessions tend to have high levels of internal capital expenditures than managers who started in other times. The coefficient is unchanged if we include other observables in Column 4 but the significance drops. I repeat the same regressions for the level of firm ROA. Column 5 shows that recession CEOs have higher level of ROA in the firm where they are CEOs than a comparable firm with a CEO who did not start in a recession. Similar to before these results are unchanged when including CEO characteristics such as the industry that the first position was in and a dummy for whether the firm was public or private.

It is important to point out that the results from this exercise can be interpreted in two ways. Managers who start their careers during recessions could either be actively shaped by the recession experiences and therefore their style is changed. The idea is that managers form their set of skills and tools in the early career years. In the case of a recession it could mean that managers observe how to manage cost cutting, deal with financial constraints and other methods that are valuable in downturns. An alternative interpretation is that people with different skills (or styles) come into the labor market at a fixed rate but only those are promoted who fit the management needs of the period. So for example, in economically bad time firms and markets might be selecting managers who are conservative and know how to preserve the firm during a downturn. To put it differently, the results could either be an outcome of changes in the selection criteria during recessions or changes in the learnings that managers are exposed to. Or in more grandios words, one could liken

this to a question of nurture versus nature. Are managerial types fixed from the start or form in response to the environmental condition. While the actual channel by which styles emerge is not crucial for the interpretation of my results in the current paper, it would be very interesting to understand this channel more deeply in future research.

However, I have some suggestive evidence that the channel by which styles emerge at least in part is through an active imprinting of managers. I find that the results only hold for managers who *start* in a recession period. The results are much weaker for managers who are hit by a recession in the middle of their career. If we believe that selection plays a role in sorting out managers during a recession who do not fit the needs of the time then we would expect this to hold irrespective of whether the recession occurs at the beginning or the middle of their career. However if these differences in managers' behaviors are actively shaped by their early career experiences, then the recession should have a stronger effect if it occurs at the beginning of a person's career rather than in the middle. The dynamic effects of recession that I observe seem to support the latter interpretation which would support a view that managers are actively shaped or imprinted by their early experiences which in turn seems to have long run effects on their management styles.

## V. Conclusion

The results of this paper suggest that the heterogeneity in management styles seems to be affected by the environment at the start of a CEOs career. In particular we observed that managers starting in recession time results in CEOs with more conservative styles and vice versa for CEOs who grew up in booms. Early career conditions also affect the career path of the manager on the way to CEO. Especially I show that the speed of promotion and the amount of firms and industry switches across the career increase when CEO in better economic conditions. The effects on the career path are quite persistent since they affect the managers career choices even 20 years after starting the first job. The long run nature of the impact might suggest that markets are not fully separating the individual achievements of managers versus the importance of the overall economic performance.

I also find that the type of firm that a CEO starts in has implications for later management style, but causation here is less obvious, since people with certain skills might select into jobs early on. For example managers who start in the financial sector or public firms tend to have a faster rise to the top but it is possible that these types of firms attract the brightest students in the first place and therefore it is not clear how much added value companies have to pay for.

These findings can have broad implications for the managerial labor market. If the formation of CEOs and their management styles follows a time to built model, then the persistence of formative experiences affects the composition of available management styles at a given point in time. For instance after extended times of high growth there are many managers who learned how to manage growing companies. But at the same time there could be a shortage of managers who know how to run firms in distress or turn-around situations. in a similar vein, large and attractive employers are net suppliers of future management styles to the economy. But this could lead to potential mismatches if the economic conditions or the industry base change radically. These results suggest that the supply of talent into the CEO labor market could sometimes have severe constraints and in turn affect how firms are run if boards are constraint in their choice of CEOs by the available talent in the market. Therefore it can be very important to understand how executive labor markets function and how they interact with the boards' task of selecting the best manager for a given vacancy.

## REFERENCES

- Bennedsen, Morten, Francisco Perez-Gonzalez, Kasper Nielsen and Daniel Wolfenzon, "Inside the Family Firm: The Role of Families in Succession Decisions and Performance", *Quarterly Journal of Economics*, CXXII (2007), 647-691.
- Chevalier, Judith and Glenn Ellison, "Are Some Mutual Fund Managers Better than Others? Cross-Sectional Patterns in Behavior and Performance," *Journal of Finance*, LIV (1999), 875-899.
- Fligstein, Neil, *The Transformation of Corporate Control* (Cambridge, MA: Harvard University Press, 1990).
- Frydman, Carola and Raven Saks, "Executive Compensation: A New View from a Long-Run Perspective, 1936-2005", Working Paper (2007).
- Graham, John and Campbell Harvey, "The Theory and Practice of Corporate Finance: Evidence from the Field," *Journal of Financial Economics*, LX (2001), 187-243.
- Graham, John and Krishna Narasimhan, "Corporate Survival and Managerial Experiences During the Great Depression", Working Paper (2005).
- Hambrick, Donald C. and Phyllis A. Mason, "Upper Echelons: The Organization as a Reflection of its Top Managers," *Academy of Management Review*, IX (1984), 193-206.
- Khurana, Rakesh, "Searching for a Corporate Savior: The Irrational Quest for Charismatic CEOs", Princeton University Press (2002)
- Lieberman, Marvin, Lawrence Lau and Mark Williams, "Firm-Level Productivity and Management Influence: A Comparison of U.S. and Japanese Automobile Producers," *Management Science*, XXXVI (1990), 1193-1215.
- McKay, Peter and Gordon Phillips, "Is There an Optimal Industry Capital Structure?" Working Paper, University of Maryland, 2002.
- Malmendier, Ulrike and Geoffrey Tate, "CEO Overconfidence and Corporate Investment," Working Paper, Harvard University, 2002.
- Murphy, Kevin J. and Jan Zabojsnik, "Managerial Capital and the Market for CEOs", Working paper, (2004).
- Parrino, Robert, "CEO Turnover and Outside Succession: A Cross-Section Analysis," *Journal of Financial Economics*, XLVI (1997), 165-197.
- Perez-Gonzalez, Francisco, "Inherited Control and Firm Performance," *American Economic Review*, XXXC (2006), pp. 1559-1588.
- Rotemberg Julio J. and Garth Saloner, "Visionaries, Managers, and Strategic Direction," *RAND Journal of Economics*, XXXI (2000), 693-716.
- Van den Steen, Eric, "Organizational Beliefs and Managerial Vision," MIT Sloan Working Paper No. 4224-01, (2001).
- Warner, Jerold B., Ross L. Watts and Karen Wruck, "Stock Prices and Top Management Changes," *Journal of Financial Economics*, XX (1989), 461-492.
- Wasserman, Noam, Nitin Nohria and Bharat Anand, "When Does Leadership Matter? The Contingent Opportunities View of CEO Leadership," Working Paper, Harvard University, 2002.

Weisbach, Michael, "CEO Turnover and the Firm's Investment Decisions," *Journal of Financial Economics*, XXXVII (1995) pp. 159-188.

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**Table I**  
**Descriptive Statistics<sup>a</sup>**

	<i>Mean</i>	<i>Std. Dev.</i>	<i>Obs</i>
Time to CEO	19.3	8.7	2974
Age to CEO	47.4	8.8	2974
Number of Firms to CEO	3.16	2.09	2974
Number of Industries to CEO	2.08	1.12	2974
Average Tenure	4.43	3.38	2659
Banking Experience?	0.20	0.40	2974
Consulting Experience?	0.04	0.12	2974
Military Experience?	0.02	0.08	2974
University Experience?	0.03	0.08	2974

<sup>a</sup>Notes:

- a. The data set is based on a cross section of individuals that held a CEO position at some point between 1992 and 2004 in an “ExecuComp” firm. We collected information on CEOs background and career path from the “Who is Who”, Galen’s biography and company proxy statements. We were able to find (some) background information for about 65% of these “ExecuComp” CEOs. In the reported tests we only include CEOs who started their career prior to 1985 to focus on managers that have at least 20 years of work experience. “Time to CEO” measures number of years between the earliest year in which the individual was CEO and the year in which the individual started his career. “Age to CEO” measures the age at which the individual first became CEO. “Number of Industries to CEO” measures the number of industries a manager was employed in. “Number Firms to CEO” measures the number of firms a manager was employed in. “Average Tenure” measures the number of years a manager stayed in a given position, averaged over all positions. “Military Experience” is a dummy for whether the individual had any military experience during his career. “University Experience” is a dummy for whether the individual had any academic experience during his career. In computing these two last measures, we attempt to eliminate any positions that are not full time appointments. “Consulting experience” and “Banking experience” are dummies for whether the individual had any experience over his career in a consulting or banking firm, respectively.

**Table II**  
**Changes in Career Paths Over Time<sup>a</sup>**

<i>Dependent Variable</i>	<i>Cohort Trend</i>	<i>Obs</i>	<i>R<sup>2</sup></i>
Time to CEO	-0.005 (0.002)	2974	0.01
Age to CEO	-0.006 (0.001)	2974	0.01
Firms to CEO	0.024 (0.007)	2974	0.02
Positions to CEO	0.004 (0.002)	2974	0.01
Industries to CEO	0.019 (0.004)	2974	0.03
Average Tenure	-0.013 (0.003)	2659	0.04
Military Experience?	-0.001 (0.000)	2974	0.01
University Experience?	-0.001 (0.000)	2974	0.01

<sup>a</sup>Notes:

- a. The data set is based on a cross section of individuals that held a CEO position at some point between 1992 and 2004 in an “ExecuComp” firm. We collected information on CEOs background and career path from the Who is Who and Galen’s biography. We were able to find (some) background information for about 65% of these ExecuCompCEOs. In the reported tests we only include CEOs who started their career prior to 1985 to focus on managers that have at least 20 years of work experience. “Time to CEO” measures the logarithm of number of years between the earliest year in which the individual was CEO and the year in which the individual started his career. “Age to CEO” measures the logarithm of that age at which the individual first became CEO. “Positions to CEO” measures the logarithm of the number of positions the individual held before becoming CEO for the first time. “Industries to CEO” measures the logarithm of number of industries a manager was employed in. “Firms to CEO” measures the logarithm of number of firms a manager was employed in. “Average Tenure” measures the logarithm of the number of years a manager stayed in a given position, averaged over all positions. “Military Experience” is a dummy for whether the individual had any military experience during his career. “University Experience” is a dummy for whether the individual had any academic experience during his career. In computing these two last measures, we attempt to eliminate any positions that are not full time appointments.
- b. The first entry in each row is the estimated coefficient from a regression of the dependent variable (described on the left of the table) on the year the individual started his career. Robust standard errors are reported in parentheses.
- c. We repeated these tests using different sample cut offs such as (1) including all CEOs, (2) including only CEOs that started their career prior to 1985 (3) including only CEOs who made it to a CEO position before the age of 45 or 50, respectively. The results were qualitatively similar

**Table III**  
**Recession and Career Path<sup>a</sup>**

<i>Dependent Variable:</i>	<i>Num Industries</i>		<i>Num Positions</i>		<i>Av Tenure</i>	
Recession	-0.067 (0.032)	-0.071 (0.030)	-0.086 (0.040)	-0.079 (0.039)	0.122 (0.041)	0.112 (0.041)
Decade F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	Yes	No	Yes	No	Yes
Adjusted R <sup>2</sup>	0.02	0.09	0.02	0.12	0.01	0.11

<sup>a</sup>Notes:

- a. “Num Industries” measures the logarithm of number of industries a manager was employed in. “Positions to CEO” measures the logarithm of the number of positions a person held before becoming a CEO for the first time. “Average Tenure” measures the logarithm of the number of years a manager stayed in a given position, averaged over all positions. “Recession” is a dummy for whether the individuals first job was started in a recession. We use the average age in the sample at which an individuals career starts (year of the first position) to impute year of first job for each individual. We obtain data on recession years from the NBER’s business cycle database. Industry fixed effects are one-digit SIC dummies for the industry the individual started his career in. Decade fixed effects are based on the decade the individual was born in. In the reported tests we only include CEOs who started their career prior to 1985 to focus on managers that have at least 20 years of work experience. Robust standard errors are reported in parentheses.
- b. We also used different sample cut offs such as (1) including all CEOs, (2) including only CEOs that started their career prior to 1985 (3) including only CEOs who made it to a CEO position before the age of 45 or 50, respectively. The results were qualitatively similar.

**Table IV**  
**Entry Position and Time to Becoming CEO<sup>a</sup>**

<i>Dependent Variable:</i>	<i>Logarithm(Time to CEO)</i>						
First Public	-0.091 (0.029)		-0.103 (0.041)		-0.096 (0.046)		
First Sales	0.034 (0.013)						
First Banking	-0.063 (0.032)		-0.053 (0.045)				
First Consulting	-0.157 (0.152)		0.087 (0.207)				
Recession			0.034 (0.014)		0.042 (0.019)		0.032 (0.021)
Decade F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No	Yes
Adjusted R <sup>2</sup>	0.19	0.20	0.21	0.20	0.20	0.23	0.21

<sup>a</sup>Notes:

- a. “Time to CEO” measures the logarithm of number of years between the earliest year in which the individual was CEO and the year in which the individual started his career. “First Public” is a dummy for whether the first job the individual held was in a public firm. “First Sales” is the logarithm of the sales of the firm the individual started his career at, measured in the year the individual joined that firm. This variable is only available for a subset of the firms in our sample, mostly due to missing data coverage in earlier years. “First Consulting” and “First Banking” are dummies for whether the individual started his career in a consulting or banking firm, respectively. “Recession” is a dummy for whether the individual’s first job was started in a recession. We use the average age in the sample at which an individuals career starts (year of the first position) to impute year of first job for each individual. We obtain data on recession years from the NBER’s business cycle database. Industry fixed effects are one-digit SIC dummies for the industry the individual started his career in. Decade fixed effects are based on the decade the individual was born in. In the reported tests we only include CEOs who started their career prior to 1985 to focus on managers that have at least 20 years of work experience.
- b. We repeated these tests using the year of the actual career start of a manager to measure “Recession” and obtained similar results. We also used different sample cut offs such as (1) including all CEOs, (2) including only CEOs that started their career prior to 1985 (3) including only CEOs who made it to a CEO position before the age of 45 or 50, respectively. The results were qualitatively similar.
- c. Standard errors are reported in parentheses. Standard errors are corrected for clustering of the error term at the industry-level.

**Table V**  
**Entry Position and Size of Firm at Which Became CEO<sup>a</sup>**

<i>Dependent Variable:</i>	<i>Logarithm(Sales of Firm at Which CEO)</i>						
First Public	0.656 (0.063)				0.193 (0.127)		0.097 (0.076)
First Sales	0.365 (0.043)						
First Banking			0.587 (0.337)				0.145 (0.1345)
First Consulting			-1.239 (0.826)				-0.672 (0.733)
Recession					-0.378 (0.198)	-0.402 (0.189)	-0.322 (0.141)
Decade F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No	Yes
Adjusted R <sup>2</sup>	0.19	0.20	0.21	0.20	0.20	0.23	0.21

<sup>a</sup>Notes:

- a. "Sale of Firm at Which CEO" measures the logarithm of the sales of the firm at which the manager became CEO, measured in the year the individual joined that firm. If a manager was CEO in several firms, we take the maximum firm size. "First Public" is a dummy for whether the first job the individual held was in a public firm. "First Sales" is the logarithm of the sales of the firm the individual started his career at, measured in the year the individual joined that firm. This variable is only available for a subset of the firms in our sample, mostly due to missing data coverage in earlier years. "First Consulting" and "First Banking" are dummies for whether the individual his career in a consulting or banking firm, respectively. "Recession" is a dummy for whether the individuals first job was started in a recession. We use the average age in the sample at which an individuals career starts (year of the first position) to impute year of first job for each individual. We obtain data on recession years from the NBER's business cycle database. Industry fixed effects are one-digit SIC dummies for the industry the individual started his career in. Decade fixed effects are based on the decade the individual was born in. In the reported tests we only include CEOs who started their career prior to 1985 to focus on managers that have at least 20 years of work experience. Robust standard errors are reported in parentheses.
- b. We repeated these tests using the sales of the first firm an individual became CEO at. We also used different sample cut offs such as (1) including all CEOs, (2) including only CEOs that started their career prior to 1985 (3) including only CEOs who made it to a CEO position before the age of 45 or 50, respectively. The results were qualitatively similar.

**Table VI**  
**Recession and Management Style<sup>a</sup>**

<i>Dependent Variable:</i>	<i>Leverage</i>		<i>Investment</i>		<i>ROA</i>		<i>SGA</i>	
Recession	-0.022 (0.009)	-0.024 (0.010)	0.010 (0.005)	0.010 (0.010)	0.014 (0.004)	0.014 (0.005)	-0.047 (0.031)	-0.039 (0.027)
First Public		0.003 (0.156)		0.002 (0.002)		0.001 (0.006)		0.051 (0.041)
Decade F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Starting Industry F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Adjusted R <sup>2</sup>	0.60	0.61	0.50	0.52	0.32	0.33	0.35	0.36
Number of Obs	2808	2808	2654	2654	2793	2793	913	913

<sup>a</sup>Notes:

- a. The sample is a firm-year level dataset covering a given firm over the years a given individual was the CEO of that firm. Balance sheet information those these firm-year observations was obtained from COMPUSTAT. “Leverage” is a measure of the book value of leverage. “Investment” is measured as capital expenditures divided by total assets. “SGA” is SG&A expenses divided by total sales. “ROA” is the ratio of EBITDA to total assets. Decade fixed effects are based on the decade a person was born in. All regressions include a control for the average level of the dependent variable over the firm’s history as available in COMPUSTAT. In the reported tests we only include CEOs who started their career prior to 1970 to focus on those individuals that have at least 30 years of work experience. Standard errors (clustered at the firm level) are reported in parentheses.
- b. We also used different sample cut offs such as (1) including all CEOs, (2) including only CEOs that started their career prior to 1980 (3) including only CEOs who made it to a CEO position before the age of 45 or 50, respectively. We also repeated the above tests controlling for industry effects in stead of firm level averages of the dependent variables. The results were qualitatively similar.

**Table VII**  
**Starting Firm Effects<sup>a</sup>**

<i>Dependent Variable:</i>	<i>Time to CEO</i>		<i>Size of Firm</i>		<i>Num Positions</i>		<i>Num Industries</i>	
GE	-0.279 (0.154)	-0.234 (0.107)	2.146 (0.896)	1.729 (0.983)	0.002 (0.169)	-0.544 (0.229)	0.247 (0.131)	0.147 (0.148)
ATT	-0.162 (0.146)	-0.187 (0.156)	1.456 (0.962)	1.135 (0.1029)	0.251 (0.191)	0.433 (0.190)	0.031 (0.151)	0.188 (0.153)
AAndersen	0.061 (0.101)	0.002 (0.117)	-1.576 (0.733)	-1.351 (0.739)	0.346 (0.119)	0.083 (0.123)	0.447 (0.096)	0.117 (0.097)
GM	0.332 (0.201)	0.353 (0.207)	1.382 (0.109)	1.597 (1.103)	0.329 (0.231)	0.453 (0.231)	0.418 (0.190)	0.471 (0.186)
IBM	0.180 (0.170)	0.265 (0.189)	0.870 (1.267)	1.121 (1.319)	0.106 (0.190)	0.029 (0.197)	-0.122 (0.152)	-0.188 (0.158)
First National	-0.477 (0.231)	-0.490 (0.241)	2.021 (1.500)	2.247 (1.513)	-0.299 (0.239)	-0.424 (0.240)	-0.061 (0.192)	-0.141 (0.193)
Ford	0.199 (0.132)	1.503 (0.642)	2.092 (0.830)	2.301 (0.844)	0.307 (0.168)	0.462 (0.165)	0.284 (0.134)	0.324 (0.133)
McKinsey	0.406 (0.326)	0.471 (0.841)	-2.032 (1.266)	-2.823 (1.103)	0.517 (0.364)	0.258 (0.353)	0.671 (0.290)	0.442 (0.218)
Merrill	-0.078 (0.174)	-0.085 (0.098)	0.054 (0.981)	0.305 (0.982)	0.087 (0.223)	0.205 (0.210)	-0.093 (0.128)	0.043 (0.175)
P and G	0.178 (0.106)	1.584 (0.646)	1.521 (0.635)	1.511 (0.662)	0.157 (0.105)	0.337 (0.134)	0.213 (0.106)	0.308 (0.107)
Decade F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Adjusted R <sup>2</sup>	0.16	0.16	0.04	0.05	0.07	0.09	0.08	0.08

<sup>a</sup>Notes:

- a. The independent variables are firm specific dummies for whether an individual's first or second job was in a given company. "Time to CEO" measures the logarithm of number of years between the earliest year in which the individual was CEO and the year in which the individual started his career. "Num Industries" measures the logarithm of number of industries a manager was employed in. "Positions to CEO" measures the logarithm of the number of positions a person held before becoming a CEO for the first time. "Average Tenure" measures the logarithm of the number of years a manager stayed in a given position, averaged over all positions. Industry fixed effects are one-digit SIC dummies for the industry the individual started his career in. In the even numbered columns, we also include a control for whether the firm is public or not alongside the industry fixed effects. Decade fixed effects are based on the decade the individual was born in. In the reported tests we only include CEOs who started their career prior to 1985 to focus on those managers that have at least 20 years of work experience. Robust standard errors are reported in parentheses.
- b. We also repeated this analysis using only information about the very first company a person was in and the results were quantitatively and qualitatively similar. We also repeated the analysis using indicator variables for whether a person was *ever* employed by a given firm and the results were weaker. We also used different sample cut offs such as (1) including all CEOs, (2) including only CEOs that started their career prior to 1985 (3) including only CEOs who made it to a CEO position before the age of 45 or 50, respectively. The results were qualitatively similar.

**Table VIII**  
**Starting Firm Effects on Management Style<sup>a</sup>**

<i>Dependent Variable:</i>	<i>Investment</i>		<i>Leverage</i>		<i>ROA</i>		<i>SGA</i>	
GE	-0.012 (0.005)	-0.010 (0.006)	-0.094 (0.090)	-0.104 (0.095)	0.027 (0.025)	0.004 (0.019)	-0.005 (0.004)	-0.005 (0.010)
ATT	-0.018 (0.005)	-0.012 (0.006)	0.046 (0.064)	0.030 (0.063)	-0.010 (0.021)	-0.024 (0.025)	-0.104 (0.063)	-0.149 (0.092)
AAndersen	0.026 (0.013)	0.029 (0.011)	-0.061 (0.048)	-0.057 (0.055)	0.026 (0.014)	0.019 (0.013)	-0.025 (0.031)	-0.049 (0.034)
GM	0.006 (0.009)	0.005 (0.011)	0.155 (0.056)	0.190 (0.064)	-0.018 (0.021)	-0.014 (0.024)	0.036 (0.010)	0.032 (0.014)
IBM	0.005 (0.005)	0.007 (0.006)	0.054 (0.048)	0.029 (0.059)	-0.028 (0.024)	-0.019 (0.029)	-0.012 (0.034)	-0.017 (0.052)
First National	0.052 (0.027)	0.044 (0.026)	0.095 (0.018)	0.101 (0.036)	0.045 (0.024)	0.059 (0.035)		
Ford	-0.024 (0.014)	-0.010 (0.013)	-0.246 (0.047)	-0.269 (0.037)	-0.011 (0.007)	-0.020 (0.019)	-0.107 (0.068)	-0.119 (0.087)
McKinsey	0.013 (0.006)	0.012 (0.006)	-0.087 (0.004)	-0.099 (0.052)	0.009 (0.010)	0.002 (0.015)	0.004 (0.006)	0.088 (0.052)
Merrill	0.075 (0.009)	0.077 (0.008)	0.114 (0.017)	0.106 (0.035)	0.079 (0.015)	0.082 (0.028)		
P and G	0.002 (0.004)	0.004 (0.003)	-0.087 (0.025)	-0.085 (0.021)	0.004 (0.016)	0.009 (0.014)	-0.066 (0.040)	-0.039 (0.029)
Recession		0.011 (0.007)		-0.018 (0.009)		0.014 (0.006)		-0.031 (0.030)
Decade F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Starting Industry F.E.	No	Yes	No	Yes	No	Yes	No	Yes
Adjusted R <sup>2</sup>	0.60	0.61	0.50	0.51	0.32	0.33	0.38	0.38
Number of Obs	8801	8801	8233	8233	8712	8712	8713	8713

<sup>a</sup>Notes:

- a. The independent variables are firm specific dummies for whether an individual's first or second job was in a given company.
- b. The sample is a firm-year level dataset covering a given firm over the years a given individual was the CEO of that firm. Balance sheet information those these firm-year observations was obtained from COMPUSTAT. "Leverage" is a measure of the book value of leverage. "Investment" is measured as capital expenditures divided by total assets. "SGA" is SG&A expenses divided by total sales. "ROA" is the ratio of EBITDA to total assets. Decade fixed effects are based on the decade a person was born in. All regressions include a control for the average level of the dependent variable over the firm's history as available in COMPUSTAT. In the reported tests we only include CEOs who started their career prior to 1985 to focus on those individuals that have at least 20 years of work experience. Standard errors (clustered at the firm level) are reported in parentheses.
- c. We also used different sample cut offs such as (1) including all CEOs, (2) including only CEOs that started their career prior to 1985 (3) including only CEOs who made it to a CEO position before the age of 45 or 50, respectively. We also repeated the above tests controlling for industry effects in stead of firm level averages of the dependent variables. The results were qualitatively similar.