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SHAPED BY BOOMS AND BUSTS: HOW THE ECONOMY IMPACTS CEO CAREERS AND MANAGEMENT STYLES

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ABSTRACT

Economic conditions when CEOs enter the labor market have a lasting impact on their career paths and managerial styles. CEOs who start their careers in recessions take less time to become CEOs, but lead smaller firms once they do. Recession CEOs also display more conservative styles: less investment in capex and R&D, more cost cutting, lower leverage and working capital needs, less aggressive tax avoidance, and lower stock return volatility. These career effects appear to be driven by distortions in the initial job allocation during recession times, and suggest that the early work environment is an important factor in the formation of managers.

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1. Introduction

A large recent literature in finance and economics aims to understand the role that CEOs and other top managers play in the firms they run, see Bertrand (2009) for a review. Traditional theories about firm decisions such as capital structure or investments abstract from the role of CEOs or assume that rational managers will behave equally if faced with the same problem. However, the more recent literature suggests that CEOs are heterogeneous and matter for the firms that they run. Several papers have shown substantial changes in a firm's stock price and accounting performance associated with top management turnovers, see for example Warner, Watts and Wruck (1989), Weisbach (1995), Perez-Gonzalez (2006), or Bennedsen, Nielsen, Perez-Gonzalez and Wolfenzon (2007). To tie these results to individual heterogeneity, Bertrand and Schoar (2003) show that top executives have large and persistent, person-specific differences in their management styles. There is also growing evidence that specific traits of CEOs play a role in their management approach, see for example Malmendier and Tate (2008), Kaplan, Klebanov and Sorensen (2012), Graham, Harvey and Puri (2013), or Benmelech and Frydman (2015).[1]

However, much less is known about how these management styles are formed. Are they affected by conditions that are outside of a manager's control, such as early career experiences? Or are they endogenously chosen in equilibrium by managers who are trying to anticipate which style is going to have the highest returns over their careers given their idiosyncratic personal characteristics? If early career experiences are indeed important for managerial styles, it points to the fact that at least part of these styles are fixed long before the managers become CEOs. As a

[1] Similarly, a large literature in management science has looked at the role of CEOs, see for example, Kotter (1982), Hambrick and Mason (1984), Fligstein (1990), Khurana (2002), and Lazear (2004).

result, macro-economic factors might shape the available talent pool in the CEO labor market over the long run.

To shed light on these questions, we look at labor market conditions at the beginning of a manager's career, i.e., recessions versus non-recessions, and trace the long-term impact of a recession start on a manager's career path and ultimate management style as a CEO. To avoid endogenous selection of when a manager chooses to enter the labor market we proxy for the exogenous starting date by using the manager's birth year plus 24, the modal age of starting the first position over our sample.

We begin by documenting that CEOs who start their careers in recessions tend to have different career trajectories than those who start in economically prosperous periods. In the following we call the former "recession CEOs." Recession CEOs on average work in fewer jobs and take less time to become CEOs, but ultimately end up heading smaller firms and receiving lower compensation (each by about 20%) than their non-recession peers. This lower pay for recession CEOs persists even after we control for firm size and performance. These outcomes are an indication that the careers of recession CEOs are significantly affected by the environment they start in.[2]

The data suggests a particular channel by which recession CEOs are impacted: We find that the coefficient on the recession dummy drops by about 50% to 20% (depending on which dependent variable about the CEO's career path is used) when we include the characteristics of the CEO's first job in the regression. For example, as discussed above recession CEOs head firms that are about 20% smaller than non-recession CEOs. However, half of this effect is

[2] In a similar spirit, several papers look at whether exogenous shocks to firm performance affect CEO compensation or CEO turnover. For example, Jenter and Kanaan (2015) find that CEOs are significantly more likely to be fired after bad firm performance caused by factors beyond their control. See also Bertrand and Mullainathan (2001), Garvey and Milbourn (2006), Jenter and Lewellen (2010), and Eisfeldt and Kuhnen (2013).

explained by the characteristics of the first job. These results suggest that one of the important channels by which recessions affect managerial careers is through distortions in the initial job allocation. These differences in initial job allocations in recession versus non-recession years appear to result in a different human capital mix or management style once the manager becomes a CEO. Therefore, learning on the job early in a manager's career seems to be important for the formation of their styles.

Second, we document that recession CEOs have more conservative management styles once they reach a leadership position when compared to their non-recession peers (within the same firm). Recession CEOs display a tendency to invest less in capital expenditures and research and development (R&D), and show lower overheads (i.e., selling, general and administrative expenses). On the financing side, they have significantly lower leverage. They also have lower working capital needs, which corroborate the idea that recession CEOs have tighter financial controls and are more conscientious about reducing capital needs. However, they pay higher effective tax rates, mitigating their concerns on potential financial distress associated with aggressive tax planning strategies. In addition, recession CEOs have lower stock return volatility. We do not find evidence that recession CEOs have different rates of return on assets.

We note that the observed effects of recession CEOs on corporate policies are not the causal effects of randomly assigning such CEOs to firms. Management styles might be (at least partially) observable to the board before a new CEO is appointed. So firms with a need for a certain type of management style might select CEOs who have the style best suited to fill this need.[3] As a result, the policy differences observed between recession and other CEOs are likely to be a combination of the true causal effects of recession CEOs and unobserved differences in

[3] Fee, Hadlock and Pierce (2013) argue for the importance of this channel.

(time-varying) firm characteristics. However, it is important to note that we do not find significant pre-trends in the year before the (recession) CEO is appointed. This result speaks to the fact that even if the board endogenously selects CEOs for their management styles, the CEO's presence is needed to implement the intended change. So indeed there is something special about these CEOs' abilities. In sum, our findings imply that the pool of managerial talent in each cohort of new executives is significantly shaped by the overall economic conditions at the time of labor market entry.

One important caveat of our data is that we do not have the full pool of latent CEOs in the economy. This sample selection could lead to a potential bias if people with different characteristics self-select or are being hired into management positions during recessions versus non-recessions. For example, a hypothesis could be that in recessions fewer or less talented people might start in management and thus our results might be driven by differential selection.[4] Labor market theories can help us to analyze this potential problem. If managerial styles were purely determined by ex-ante types, the CEO labor market would function like classical matching models with heterogeneous types but no learning on the job, where firms can only observe a manager's type once the manager starts working for the firm, see Jovanovic (1979a). Now imagine that recessions were to draw in a different talent pool. In that environment, we would expect to see quicker separation from the job once the recession is over, and the first job should not be predictive of the ultimate career outcome and management style.

The evidence in the paper does not support this hypothesis: First, we do not find increased separation after the first job for managers hired in recessions. If anything, they stay a little longer in their firms compared to non-recession CEOs. In addition, we find that the

[4] It is not obvious why there should be these types of selection effects over the business cycle given that managerial careers take many decades. But if graduates are myopic or have financial constraints, one could imagine such an effect.

characteristics of the first job are highly predictive of the ultimate career outcome. Finally, we find no significant difference in the observable background between recession and non-recessions CEOs (e.g., their educational attainment or quality of schools they went to); neither is there significant difference between the average number of CEOs who started their career in a recession year and the average number of CEOs who started in other years. While we cannot completely rule out that there could be differential selection on unobservable characteristics, there is no evidence for this channel. Oyer (2008) arrives at a very similar conclusion when looking for differential selection effects of Stanford MBA students into investment banking. He concludes that "it is clearly *not* the case that those who went to Wall Street during the bull markets of the mid-1980s and early 1990s were less prepared for finance careers than those that went to Wall Street in the bear markets of 1988-1989 and 1993-1994" (Oyer 2008, p. 2613). Since his sample allows him to observe the entire distribution of Stanford MBAs, the lack of selection is very reassuring.

The alternative hypothesis is that starting in recessions affects managerial outcomes *ex post* via imprinting (learning) of different management styles on the job. One can think of this channel in the context of the model of Gibbons and Waldman (2006) with "task-specific human capital." This model builds on the matching model but adds a learning-on-the-job component. In this model early job assignments can lead to long-term career impact, since it affects the type of human capital that the manager acquires, see also Jovanovic (1979b), Neal (1999) or Gibbons and Waldman (2004). Our results are consistent with this hypothesis, since we show that recession CEOs are early on assigned to firms with different characteristics, and that the first job assignment explains almost half of the recession impact. These findings are also consistent with a large literature in management science that the early-career stage is the relevant sensitive

period of imprinting for individuals, see for example Higgins (2005) or McEvily, Jaffee and Tortoriello (2012).[5]

Our work is related to a growing literature that looks at cohort effects in different labor markets. These papers usually take one of two approaches: A first set of papers has access to data on a specific population at the time of entering the labor market. See for example Oyer (2006, 2008), Kahn (2010), Oreopoulos, von Wachter and Heisz (2012), or Shu (2012, 2015). Perhaps most comparable to the CEO labor market is the work by Oyer (2008) who analyzes cohort effects for MBA graduates on their ability to obtain starting positions in the investment banking industry. He shows that these initial job allocations affect the long-run ability of graduates to succeed in the financial industry. Our paper is complementary to these papers, since they predominantly focus on the *extensive margin* and show that employees or students who start in bad economic times get worse starting jobs and lower salaries or do not even get a job at all. We focus on the *intensive margin* and show that the career progression and ultimate managerial styles differ for recession CEOs versus non-recession CEOs.

The second approach the literature has taken is to condition on people who did become CEOs and analyze how the type of firms (or firm outcomes) varies with the background characteristics of the CEO. The benefit of this approach is that researchers can have access to a more representative set of CEOs. The disadvantage is that we do not observe the extensive

[5] Marquis and Tilcsik (2013, p. 199) define imprinting as "a process whereby, during a brief period of susceptibility, a focal entity develops characteristics that reflect prominent features of the environment, and these characteristics continue to persist despite significant environmental changes in subsequent periods." A large literature, in particular in management science, has looked at *imprinting* of early career experiences on managers' long-run outcomes and strategies. See Marquis and Tilcsik (2013) for a recent review. However, the challenge in most of these papers is that the choices which managers make early on in their careers might also be a reflection of the quality and characteristics of the person. This endogeneity 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 be a function of the type of managers who select into this job. By looking at recessions we are able to identify an exogenous shock to managers' careers that does not suffer from this omitted variable bias. See Cornaggia and Zou (2008) for a similar approach in the analyst setting.

margin (people who never become CEO). But as long as there is meaningful variation in the intensive margin (differences between the firms that CEOs run), which is the case among U.S. publicly listed firms, we can analyze the role of CEO backgrounds for firm outcomes. A number of recent papers have used this approach, see for example Malmendier and Tate (2008), Kaplan, Klebanov and Sorensen (2012), Graham, Harvey and Puri (2013), or Benmelech and Frydman (2015).

Finally, there are a few studies that look at CEOs who grew up or lived through the Great Depression. For example, Malmendier, Tate and Yan (2011) investigate how the Great Depression experience affects corporate financial policies.[6] Our paper differs in two important ways. First, we significantly expand the dimensions of corporate policies and the time period as well as include information about the full career history of the CEOs. Second and more importantly, we document that the impact of recessions works through the timing of when a CEO enters the labor market rather than when he/she grows up. Since the sample in the earlier paper is relatively small due to historical data, the authors could not differentiate between *birth cohort effects* versus the impact of *starting the career* in a recession, as we suggest in our analysis. By using the precise variation of the year that the CEO starts the first job, our results show that the important driver for the managerial style of CEOs and their career paths is whether a manager's labor market entry falls into a recession period, since it affects the initial job allocation of the manager.

Graham and Narasimhan (2004) analyze whether CEOs who lived through the Great Depression have lower leverage levels going forward. Interestingly, the authors find that

[6] Malmendier, Tate and Yan (2011) measure exposure to the Depression using a decade fixed effect for all the people who were born in the decade leading up to the Great Depression (i.e., 1920 to 1929) and compare them to those born in other decades. Malmendier and Nagel (2011) use a similar approach to show that past economic shocks have long-lasting effects on individual investment choices such as capital allocations to risky assets and stock market participation.

leverage levels of Depression CEOs drop in the aftermath of the crisis but the use of debt increases in the 1940s at companies for which the Depression-era company president retires or otherwise leaves the firm. The difference to our approach is that Graham and Narasimhan (2004) look at people who were already CEOs when the Depression hit, not managers who started their careers during the Depression. So their results speak to the persistence and memory of shocks at the level of the firm while we look at how management styles are formed at an individual manager's level.

The rest of this paper is organized as follows. Section 2 provides a description of the different data sources used to construct the dataset and discusses potential selection issues in the sampling framework for this study. Section 3 analyzes the effects of early career experiences such as recessions and characteristics of the first position on the career path of the managers. Section 4 quantifies the importance of starting in recessions on the managers' styles after they become CEOs. And finally Section 5 concludes.

2. Data Description and Sample Selection

2.1. Data Construction

The data for this paper come from a number of different sources. We start with the companies and CEOs included in the Executive Compensation (Execucomp) database of Compustat between 1992 and 2010. Execucomp covers the S&P 1500 and companies that were once part of the S&P 1500. For each of these CEOs, we collect their career history from different sources that contain biographical information of the CEOs. Those data sources are the Biography in Context (formerly Biography Resource Center),[7] Bloomberg, Forbes, and the proxy filings of

[7] Biography in Context combines biographies from printed Gale Group publications with biographies from The Complete Marquis Who's Who. The database also includes full-text articles from hundreds of periodicals.

the company itself. This information allows us to compile data on the career profile of the CEOs and their demographic characteristics. We collect information on the different companies and non-business entities a manager worked in over his/her career, the position(s) a manager held within each of the firms and the dates at which the position was started and ended. In addition, we have information on the manager's birth year, birth place, gender, marital status, political affiliation, religion, and educational background (the school where he/she earned his/her undergraduate degree or any high-level degree such as MBA, Master or PhD, as well as the year when he/she graduated). We also obtain information about whether the CEO was ever in the military, held a political office or a position in academia. This dataset is constructed at the CEO level so that we have one observation per person.

From these sources we find (some) background information for over 5,300 CEOs or about 80% of the CEOs in the Execucomp universe. In the first step, we focus on CEOs who have a relatively complete and continuous career profile to examine how economic conditions at an individual's career start affect his/her career path. For those CEOs, we have their complete career data since their first job and there are no major holes of more than three years at any point in their employment histories. Our sample includes 2,058 such CEOs.

2.2. Descriptive Statistics

The descriptive statistics are tabulated in Table 1. In our sample, 21% of the CEOs started their career in a recession. "Recession" is a dummy variable that equals one if there was a recession in the calendar year that a CEO reached the age of 24, where recession years are based on the business cycle dating database of the National Bureau of Economic Research (NBER). We code (calendar) years that the economy is in a recession period (excluding the peak of a business cycle) as a recession year. To be classified as a recession year, the (calendar) year must

either include the trough of a business cycle or fully falls into the recession period. These years receive a one while all remaining years, which are moderate to medium expansion years, are coded as zero. We also repeat all our regressions below using a measure of the depth of the recession instead of just a dummy for whether there was a recession at a manager's career start. We measure the depth of the recession as the number of months that a given recession lasted, again based on the NBER recession dating convention. All the results are robust with this coding.[8]

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 22 years to become a CEO, and is around 47 years old at the time of starting the first CEO position.[9] He/she has on average worked in two different industries and has been employed in three prior companies before starting the current job. The average manager held about six positions before becoming CEO, and the average tenure in each of the prior jobs is three years. Note that these averages do not fully sum up to the average time to become CEO of 22 years, since a number of CEOs hold appointments in non-business entities at some point in their career, such as the government, nonprofits, or associations. 10% of the CEOs are the founder of the firm; 15% of the CEOs have some prior experience in banking or other financial industry; 10% have some prior military experience; 8% of the CEOs started out as a consultant and 6% started out as a lawyer; 5% of the CEOs have held a political office and only 3% have spent time in academia; 18% of the CEOs started out in

[8] Part of the results from this alternative specification is tabulated in Table B5 in Appendix B. We also replicate the tests using unemployment rates as a measure of poor economic conditions. The results generally go in the same direction as those using recessions but are usually much noisier. Since unemployment rates are a less sharp measure of poor economic conditions than recession dating, we prefer the specifications recorded here. In addition, labor market conditions for white-collar workers might not be well captured by general unemployment rates. The unemployment rates and our recession indicator based on NBER data have a correlation of 45%.

[9] 149 CEOs out of these 2,058 CEOs are CEOs in several firms. For these multiple-firm CEOs, we focus on variables related to the first CEO position. We rerun all regressions using the variables related to the last CEO position or the CEO position with the maximal firm size; our inferences are largely unchanged.

a private firm and 9% of the CEOs started out in a firm that ranks within the top ten firms from which CEOs come.

We obtain the data on the sales of the first public firm the individual worked at from Compustat (measured in the year the individual joined the firm). The average sales are $3,409 million. We also obtain from Compustat the data on sales, return on assets (ROA) and Tobin's Q of the firm at which the manager became CEO, measured in the year right before the CEO started the position. The average sales, ROA and Tobin's Q are $3,117 million, 15%, and 1.76, respectively. Finally, we obtain from Execucomp the first-year total compensation data for these CEOs. The distribution of the compensation variable is highly skewed (likely due to very large first-year compensation packages for outside hires). The total value of the average (median) CEO's compensation package including option grants is $3,299,000 ($1,678,000); and the total value of the average (median) CEO's compensation package including options exercised is $3,088,000 ($1,206,000).

2.3. Firm-Level Panel Data

We expand the sample in the second step to study how certain conditions at the beginning of a CEO's career affect the management style of the CEO when in office. In this step, we do not need detailed information on the career trajectories of these individuals and only require information on the year the individual starts his/her career, the year the individual becomes CEO, and the year the individual leaves the position of CEO. Following Bertrand and Schoar (2003), we only include CEOs who have been in their position at a firm for at least three years to ensure that they are given a chance to "imprint their mark" in a given company.[10] As is customary in the

[10] Our results are robust to removing this condition.

study of management style, we exclude CEOs of financial, insurance, and real estate firms, as well as CEOs of regulated utilities. These restrictions result in a sample of 4,152 CEOs.

We then form a dataset by merging these CEO characteristics and career profiles with Compustat firm-level data to obtain information about the type of firm the CEO heads. This merger results in a panel dataset at the firm-year level during the time that the CEO was in the office, as well as at least five years before the CEO came into office and five years after the CEO left office when such data are available. By construction, the dataset only contains CEOs who were at the helm of their companies in the years between 1992 and 2010. However, the firm-level panel data is not restricted to the 1992-2010 period if a CEO took office before 1992. Rather, it includes all available data points for a CEO after he/she took office till he/she left.[11] For each firm-year, we know the characteristics of the CEO who was in office at the time. Firm-level data are not matched for any employment spells of a manager prior to getting into a CEO position. Lastly, we obtain data on stock returns from the Center for Research in Security Prices (CRSP).

2.4. Sampling Strategy

It is important to highlight the benefits and limitations of the sampling strategy in this paper. First, sample selection here is conditional upon managers who became CEOs at some point in their career and were at the helm of their company in the years between 1992 and 2010. While these CEOs are relatively successful managers in the first place, there is still a substantial amount of cross-sectional variation between firms, since public firms in the United States vary

[11] When using the pre-1992 observations, we effectively compare the policies of "a recession CEO that survived in office until at least 1992" to the policies of "a succeeding non-recession CEO (within the same firm) that started office after 1992" or the policies of "a non-recession CEO that survived in office until at least 1992" to the policies of "a succeeding recession CEO (within the same firm) that started office after 1992". Hence, including pre-1992 observations gives us a better measure of the average "style" of a CEO that started office before 1992. Nevertheless, to ensure that this sampling strategy does not induce a bias, we perform a robustness check by dropping all pre-1992 observations and using the 1992-2010 sample. Our inferences are largely unchanged.

largely in their size, pay level and other success metrics of the managers. This heterogeneity gives us enough variation in CEO outcomes to differentiate between CEOs that had tremendous success in their careers and those CEOs 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 we could observe if there are systematic factors that predict whether a given manager becomes a CEO or not. However, the main difficulty with this alternative sampling strategy is how to determine the "population at risk." For example, one could focus on the cohort of MBAs graduating each year in the United States. But obviously this data is very difficult to collect. In addition, more than one half of the CEOs in our sample do not have MBAs. So ideally one would have to cast an even wider net. A recent paper looking at one cohort of MBAs is Kuhnen (2011).

One potential issue with our sampling strategy is that managers who start in recessions may be less likely to become CEOs in the first place. However, we believe that this is not a first order concern in our data, since in that case our sample would include fewer CEOs starting in a recession year than those starting in a non-recession year. But this is not the case: We do not find in our sample that the average number of CEOs starting in a recession year is statistically different from the average number of CEOs starting in other years. As an additional test, we focus on the sample of managers who became executives included in the Execucomp database between 1992 and 2010 and test whether recession starters are less likely to become CEOs compared to their non-recession peers. Specifically, we take each (birth) cohort of these executives and calculate the fraction of managers that became CEOs. We regress this variable on

a dummy for whether there was a recession at each cohort's job market entry. The coefficient on the recession dummy is not statistically different from zero, suggesting that there is no difference in the supply of CEOs in recessions versus non-recessions.

A related issue with our sampling strategy is that there may be differential selection into the CEO labor market in recessions versus non-recessions. However, our data suggests that this is not the case either. We do not find significant differences in the undergraduate or postgraduate school background between recession and non-recession CEOs. To test this, we create a dummy for whether a manager obtains his or her undergraduate or postgraduate degree from an Ivy League school,[12] and we regress this variable on a dummy for whether there was a recession at the time of the manager's job market entry. The coefficient on the recession dummy is very close to zero but the standard error is very large. Similarly, we do not find significant differences in the number of degrees (such as MBA, Master or PhD) between recession and non-recession CEOs. So it appears that the pool of candidates that enter the CEO labor market does not change significantly over the business cycle. While we cannot completely rule out that there could be differential selection on unobservable characteristics, there is no evidence for this channel.

An additional selection issue concerns the coverage of managers in sources like the Biography in Context, Bloomberg, and Forbes. Managers of larger and more successful firms might be more likely to be included in such biographical sources. Moreover, these CEOs might also be more willing to share information with the public. To avoid systematic bias in the completeness of information due to selective disclosure from voluntary sources, we supplement the data collection with biographical information from proxy filings. Even after using a combination of these sources, there is indeed more systematic coverage for CEOs in larger firms,

[12] Results are quite similar when we define the dummy variable based on the top ten (or twenty) schools instead of the Ivy League schools.

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 changes over time, the results could be affected by these differences in coverage. To alleviate this potential concern, we include decade fixed effects in all regressions.

Finally, a different type of sampling bias 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 individuals 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 we rerun all regressions only for CEOs who had a "fast career" (e.g., top 50% of the sample, in the early years of the sample as well as in the later years of the sample). So we compare managers on a fast track to the CEO position across different time periods. However, one could be concerned that these CEOs are fundamentally different from the rest of the market. For that purpose, we conduct a second robustness check that is based on following all the CEOs in one cohort. We only include CEOs that started career prior to 1980, and we repeat it for different time cutoffs. The latter approach allows us to look at all CEOs within the older cohorts. Under either approach, our inferences are largely unchanged.

3. CEO Careers and Early Recessions

3.1. Early Recessions

In the first step, we want to understand how the economic conditions at the time that a manager enters the labor market affect the type of career that he/she will have. The motivation

behind this analysis is that early career experiences might have a long-lasting imprint on the manager's career outcomes. In the second step, we then analyze whether these early career experiences also affect the management style of the CEOs.

There is a widespread perception that early career experiences can shape a manager and might have lasting effects on his/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, obviously better employers are able to attract the best candidates from the start, even if they do not have a causal impact on the career of these employees.

One factor that is exogenous to the career choice of managers is the economic conditions at the time that managers enter the labor market, since a person's birth date is largely exogenous to their own life. However, if smart individuals know that it is disadvantageous to start one's career in a downturn, they might try to postpone entering the labor market in these times. In that case, the most well-informed and potentially smartest people would delay entering the market while the average employee still enters, which would then lead to selection effects. To avoid this type of selection bias, we proxy for the exogenous starting date by using a person's birth year plus 24. This specification is based on the observation that the distribution of starting ages has a strong mode at 24, as shown in Table 2. The likelihood of someone starting their first *full-time* job at the age of 24 is more than 21% and almost doubles that of starting work at the age of 23. The likelihood of starting at the age of 25 is still 16%, but then quickly drops off with older ages. Therefore, we use 24 as the target age at which managers enter the labor market. We also repeat all our regressions using 24 and 25 as target starting ages and our inferences are unchanged.

This empirical strategy allows us to focus only on the exogenous part of a manager's starting conditions and not the endogenous choices he/she might have made in the timing when to begin his/her career. Our main variable of interest, "Recession", is a dummy variable that equals one if there was a recession at the time of the manager's job market entry, and zero otherwise. We call these managers who start their careers in recessions "recession CEOs."[13]

3.2. Early Career Path

In Table 3, we analyze a manager's career path as a function of the economic conditions at the time of labor market entry.[14] We 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 (proxied by the birth year plus 24).[15] The specification controls for decade fixed effects (of the decade in which a manager was born) to account for any long-run trends in the economic environment and the way CEO careers have evolved in the United States.[16] Therefore, the variation in these regressions comes from comparing CEOs who started in a recession year with CEOs who started in a non-recession year in the same decade. We also control for the industry in

[13] In untabulated results, we see in the data that recession CEOs tend to be older (marginally significant) when entering the labor force than non-recession CEOs. This result suggests that some individuals do delay their job market entry when in a recession, which could be evidence of endogenous entry into the labor market. However, we find no evidence that those recession CEOs who delayed their job market entry have different outcomes from other recession CEOs.

[14] The univariate statistics on overall differences between recession and non-recession CEOs are consistent with the results reported in Tables 3 and 4 (see Table B1 in Appendix B). The univariate statistics on overall differences between recession CEOs and non-recession CEOs that are matched based on being very close in age to the recession CEO yield similar inferences.

[15] Throughout the paper we compare recession CEOs with non-recession CEOs. In additional analysis, we include in the regressions a boom dummy, an indicator variable for those CEOs who enter the labor market in business cycle peaks according to the NBER's business cycle dating database. So we use those CEOs who start their careers in neither recessions nor booms as the benchmark group. We continue to find quite similar results for recession CEOs. However, we do not find any significant effects for boom CEOs on any of our outcome variables. The coefficients on the boom dummy in all the regressions are very close to zero and the standard errors are very large.

[16] A general perception from the executive labor market is that the careers of CEOs have become more active with quicker succession to the top position and more movements across firms and industries, see for example Parrino (1997), Murphy and Zabonjik (2007), Bertrand (2009), Frydman and Saks (2010) and Frydman (2013). Our results are robust to including a linear time trend in addition to the decade fixed effects.

which a CEO started the career, where industry effects are measured at the one-digit SIC level.[17] The rationale for including industry controls is that different industries might vary in their propensity and speed of promoting people. It would be especially interesting if there are 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 do not include the industry fixed effect. These results suggest that the selection into industries based on the economic conditions at the beginning of the career does not have a measurable effect on a CEO's career path.

Panel A of Table 3 shows that recession CEOs take less time to become CEOs than non-recession CEOs (see column 1), and they are also younger when they become CEOs (see column 2). On average recession CEOs take about 1.5 years less time and are about one year younger when they are promoted into the top job. We then look at the number of industries and firms a manager was employed in over the career path before becoming CEO. Columns 3 and 4 show that recession CEOs have less mobility across both industries and firms; the effects are not very large, with coefficients equal to -0.128 and -0.137, respectively. In column 5, we look at the number of business positions a person held before becoming CEO for the first time. CEOs who start in recession periods tend to go through fewer positions before becoming CEOs than those individuals that start in other years. The coefficient is -0.421, which translates into about one fewer year to reach the CEO position for an average manager (-0.421 times 2, the median of average tenure as shown in Table 1). In column 6 we show that the average tenure within each position is longer for those people who start in recession years. The dependent variable "Av Tenure" is calculated as the number of years a manager stayed in a given position, averaged over all business positions in his/her career prior to becoming CEO. The coefficient of 0.367

[17] We code consulting and law firms as separate industries.

translates into about two more years prior to becoming CEOs for an average manager. Finally, we do not find that economic conditions at the time of the career start affect the probability to be the founder of the firm (see column 7).[18]

In Panel B of Table 3, we document that managers who start their career in recessions have different early career experiences. The regressions in columns 1 to 8 are linear probability models.[19] Recession CEOs are less likely to start out as a consultant (column 3), more likely to work in a private firm when entering the labor force (column 7), and less likely to get their first job in a top ten firm that is good at producing CEOs (column 8). Specifically, the change in odds associated with recession CEOs are -2.5% for consulting experience, 4.3% for starting in a private firm, and -3.1% for starting in a top ten firm. In addition, when we look at the sales of the first public firm where these individuals worked, recession CEOs tend to work in smaller firms than non-recession CEOs (column 9).[20] The coefficient of -0.29 suggests that, on average, the sales of the first public firm are 25% ($e^{-0.29} - 1$) lower for recession CEOs than for non-recession CEOs. However, we do not find evidence that starting one's career in a recession affects his/her chances of being hired by a bank (column 1), the military (column 2), a law firm (column 4), the government (column 5) or academia (column 6).

3.3. Career Outcomes

We next examine whether starting in a recession also affects the ultimate career outcome. In Table 4 we focus on two measures that can proxy for the manager's career outcomes: the size of the firm in which he/she becomes a CEO, and his/her total compensation for the first year as a

[18] In our sample, there are 320 individuals who have their whole careers in one firm (i.e., starting in an S&P 1500 firm and end up as the CEO of that firm). We find that recession CEOs are more likely to be these one-firm individuals. Our inferences are unchanged after we drop these one-firm individuals.
[19] Results are similar with logit regressions.
[20] We also find that in the subsample of individuals who start their career in a public firm (749 observations with sales data), recession CEOs tend to work in a smaller firm than non-recession CEOs.

CEO. We measure firm size as the natural 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. We also look at ROA and Tobin's Q of the firm in which he/she becomes a CEO.[21]

Column 1 of Table 4 suggests that recession CEOs on average end up heading smaller firms than managers who start in non-recessions; the coefficient of -0.234 suggests that on average firm size for recession CEOs is 20% ($e^{-0.234} - 1$) smaller than that for non-recession CEOs. However, we find no discernible differences in terms of profitability (see column 2) or valuation (see column 3), suggesting that these firms are not necessarily of a worse type. We then look at two proxies for the total compensation of these individuals for the first year as CEOs: the total compensation including option grants and the total compensation including options exercised.[22] The results in columns 4 and 5 suggest that on average recession CEOs receive lower total compensation when becoming CEOs. The coefficient in column 5 (-0.174) suggests that on average recession CEOs receive 16% ($e^{-0.174} - 1$) lower compensation than non-recession CEOs. In addition, this lower pay is not just a function of running a smaller firm, since it persists even after we control for the size and profitability of the firm (see columns 6 and 7). The coefficient in column 7 (-0.112) suggests that on average the negative effect of recession on pay is -11% ($e^{-0.112} - 1$), holding firm size and profitability constant.[23] Decomposing the total compensation, we find that recession CEOs receive considerably less non-option compensation

[21] The decline in sample size from Table 3 to Table 4 is due to the fact that we do not observe those firm characteristics if a manager first became a CEO of a private firm.

[22] The distribution of the compensation variable is highly skewed. In the regressions, we use log-transformed values and winsorize the variables at the top and bottom one percent to mitigate the influence of extreme values. Our inferences are unchanged when we winsorize the variables at the top and bottom five percent or run median regressions.

[23] Results are robust to controlling for the age of the CEO. In addition, when we supplement the data with the first available data from Compustat (to achieve the full sample of 2,058 observations) and rerun all the regressions in Table 4, we obtain quite similar results.

(salary and bonus). But we do not find systematic pattern on either options granted (using Black-Scholes) or value realized on option exercise.

Overall, these results suggest that managers who start in recession years on average work in fewer jobs and take less time to reach a CEO position. Moreover, these early career experiences have lasting impacts on the ultimate outcome of a manager's career, since these managers end up heading smaller firms and receiving lower total compensation when they become CEOs.[24]

3.4. Impact of the First Job

If starting in a recession affects the initial job assignment of a manager and at the same time impacts the ultimate career outcomes, one can ask whether recessions have an independent effect on both of these dimensions or the impact of the recession affects career outcomes mainly by distorting the initial job allocation. To test this hypothesis, we rerun our regressions in Table 3 and Table 4 but include controls for the characteristics of the initial position that a manager starts in.[25] If recessions affect managers' careers mainly by assigning them to more non-standard jobs, the coefficient on the recession dummy should drop in size when we control for the job characteristics. We focus on the major characteristics we established in Panel B of Table 3: size

[24] We do not find evidence that recession CEOs are more likely to get a second CEO job. This result allows us to rule out the possibility that these recession CEOs in their second job go on to run a larger firm and have a higher paying job after starting in the smaller firm that we document.

[25] Though it is clearly more endogenous, we also examine the correlation between early career choice and career progression to CEO. For example, we find that starting in a firm that ranks within the top ten firms from which CEOs come is associated with becoming CEO in a larger company and receiving higher compensation. These results are interesting but cannot be interpreted in a causal way since people of different qualifications and types might be choosing these different career paths early on. 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.

of firm (first sales), a dummy for whether the firm is private, and whether a manager starts in the banking or consulting industry.[26]

In Panel A of Table 5, we find that after controlling for these job characteristics the estimated coefficients on the recession dummy are much smaller across most dimensions. In column 1, the dependent variable is the time a manager took to become CEO (time to CEO). The coefficient on recession is 1.16 when including the first job characteristics, but was almost 1.55 before. Similarly, in column 2 we repeat the same regression but use age to CEO as the dependent variable. Again the estimated coefficient on the recession dummy drops by more than 20% and becomes statistically insignificant. These effects are even bigger for the number of positions and industries CEOs go through in their career, see columns 3 through 6. Here the inclusion of the job characteristics reduces the size of the recession dummy by more than 30%.

In Panel B of Table 5 we now repeat a parallel exercise by looking at the career outcomes. In column 1, we look at the size of the firm at which they become CEO. Including the characteristics of the first job reduces the size of the estimated coefficient on the recession dummy by almost 50%, and the coefficient becomes statistically insignificant. In column 5, the effect of recession on the total compensation as CEO is also reduced after controlling for the first job characteristics. However, in column 7, the coefficient on the recession dummy remains almost unchanged when we control for the starting position. This result might be driven by the fact that the additional control variables (Size, Sales, ROA) already reflect to a certain extent the initial job characteristics since these variables are also likely to be affected by the starting job.

3.5. Robustness Checks

[26] We do not control for "Top Ten" because it is strongly correlated with firm size that is included in the regression. Nevertheless, the results are quite similar when we add "Top Ten" as an additional control.

When examining the effect of recessions on CEO careers (Tables 3, 4 and 5), we use a relatively small sample of 2,058 CEOs for which we were able to collect complete career data. However, as we mentioned earlier, we were able to find some background information for over 5,300 CEOs. The concern is that this sample attrition might be linked to CEOs' career choices and might differ between recession and non-recession CEOs. For example, if more recession CEOs take circuitous routes with unusual interludes that they downplay later, then these CEOs might be more likely to be dropped from the sample. Hence, the finding that recession CEOs on average work in fewer jobs and take less time to become CEOs might be due to the fact that recession CEOs who took circuitous career paths have been dropped.

To address this concern, we repeat the analysis in Tables 3 and 4 with a larger sample. Many of the career path and career outcome variables analyzed in Tables 3 and 4 do not actually require information on the complete career path. All that is required to analyze "Time to CEO", "Age to CEO", and all the variables in Table 4 is information on CEO age, the time s/he first became CEO, and at which firm. This information is available for almost the entire sample. Our inferences are unchanged when the analysis is repeated in this larger sample of over 5,300 CEOs (see Tables B2 and B3 in Appendix B).

Interestingly, by comparing the summary statistics between the restricted, full-information sample and the larger sample, we find that the dropped CEOs have longer "Time to CEO" (3.6 years) and higher "Age to CEO" (2.3 years), both statistically significant at the one percent level. However, this selection does not seem to induce a bias because it is not the case that recession CEOs are more likely to be dropped. In addition, the differences between dropped recession CEOs and dropped non-recession CEOs are consistent with our findings for the restricted sample.

Another potential concern is that our results might be driven by one or two recessions in the early 1970s or 1980s in combination with the technology boom of the late 1990s and/or the financial crisis of the late 2000s. For example, there are recessions in 1970 and 1973-75, and many CEOs who start their careers during these recessions probably become CEOs during the technology boom of the late 1990s. Hence, the finding that these CEOs become CEOs earlier in their careers, at a younger age, and at firms with smaller sales might have nothing to do with the recessions of the 1970s, and a lot to do with the technology boom of the 1990s. Put differently, if unusually many recession CEOs start (or are in office) during unusual periods, such as the technology boom or the financial crisis, then recession CEOs might look different for reasons that have nothing to do with the economic conditions at the start of their careers. To ensure that the results on CEO career paths (Table 3 Panel A) and on the first firm at which a manager becomes CEO (Table 4) are not driven by the technology boom or the financial crisis, we perform a robustness check by dropping CEOs who start in 1996-2000 or 2008-2009. Our results are robust to dropping those CEOs (untabulated).

A related concern is that the recessions that dominate the results may be correlated with various wars in which young men were drafted. To alleviate this concern, we control for a CEO's military experience. Our results continue to hold (untabulated).

4. 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/she becomes a CEO. On average this time lag would be 20 years after the CEO starts his/her first job. Do managers who start their careers in recessions have more conservative management styles than those who start in non-recessions? This test is similar to the approach used by

Bertrand and Schoar (2003) in using changes in observable outcomes at the firm level as an indicator of the impact that the CEO has on the firm. However, we do not have to rely only on firm switchers (i.e., CEOs observed in multiple firms) in this regression since we can examine changes in firm behavior when a recession CEO replaces a non-recession CEO or vice versa.

To test this hypothesis we start with Compustat data for the years that a given CEO was at the helm of the firm. We then match the CEO's career history to the annual firm data for the time that the CEO heads that company. The firm-level variables of interest are corporate outcomes related to investment, financial, and tax policies, as well as organizational strategy, firm risk and operating performance. We regress firm outcomes on the CEO's career profile to test whether decisions vary systematically based on the CEO's profile. To account for fixed differences in outcomes at the firm level, in all regressions we control for firm fixed effects. Thus, the "Recession" coefficient is identified from firms switching from a recession CEO to a non-recession CEO, or vice versa.[27] As before, we also include decade fixed effects 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 recessions and CEOs who started in non-recessions within a given decade.[28] To remove time-varying changes in macro or industry conditions, we control for (two-digit SIC) industry-year fixed effects. We report robust standard errors clustered at the firm level.[29]

The results from these tests are presented in Table 6. We include basic control variables in these regressions, mainly following Bertrand and Schoar (2003). In columns 1 and 2, we

[27] We find that the probability of hiring a recession (versus non-recession) CEO is not affected by the type of the incumbent CEO, suggesting that firms do not proactively select into a certain type of CEOs.
[28] Decade fixed effects subsume the "Depression Baby" effect documented in Malmendier, Tate and Yan (2011). In recent decades (i.e., 1970s, 1980s and 1990s), recessions have primarily happened in the beginning of the decade. Thus, even with decade fixed effects, recession CEOs might tend to be older than non-recession CEOs. In untabulated results, we include a continuous control for CEO age and find quite similar results.
[29] Results are robust with bootstrapped standard errors.

report the results for investment policy. The first variable in the table is capital expenditures. The specification includes controls for cash flows and lagged Tobin's Q. Managers who started in recessions tend to have lower levels of capital expenditures than managers who started in other periods; and the effect is -0.4% of lagged total assets. The next variable is R&D expenditures. The result shows that recession CEOs also spend less on R&D, and the effect is -0.4% of lagged total assets. The first two columns suggest that recession CEOs have more conservative investment policies than their non-recession peers.

Column 3 shows that recession CEOs show more concern about cost effectiveness since they have lower selling, general and administrative expenses (with coefficient equal to -1.2%). Columns 4 and 5 focus on financial policy. Column 4 shows that leverage levels are significantly lower for firms led by recession CEOs (with coefficient equal to 0.8%). This result on leverage is robust to including the full set of controls as in Table VII of Malmendier, Tate and Yan (2011). The fact that recession CEOs also have lower working capital needs (see column 5, with coefficient equal to -1.7%) suggests that they are able to run a tight ship and get financing from their customers rather than having to finance them.

In column 6 we look at the tax policy. Basic control variables include firm size and a dummy for whether the firm has a positive value of tax loss carry-forward (TLCF). Dyreng, Hanlon and Maydew (2010) document that individual executives play a significant role in determining the level of tax avoidance that firms undertake. We find that firms led by recession CEOs have higher effective tax rates as measured by the ratio of cash taxes paid to pretax income (with coefficient equal to 1.8%). This result suggests that recession CEOs are likely to be more concerned about the costs of financial distress from aggressive tax planning strategies than non-recession CEOs.

In column 7 we look at the overall riskiness of firms as proxied by the stock return volatility (Coles, Daniel and Naveen 2006). The result suggests that recession CEOs have lower stock return volatility (with coefficient equal to -4%). Finally, we look at the effect of recession CEOs on firms' operating performance. Column 8 shows that a recession CEO has a similar rate of return on assets (ROA) in his/her firm as a CEO who did not start in a recession (with statistically insignificant coefficient). In column 9, we use an alternative accounting measure of performance that is less subject to accounting manipulations, operating cash flow (as a ratio of lagged total assets), and find a quite similar result.[30]

Taken together, the results seem to suggest that recession CEOs indeed manage their firms more conservatively. In untabulated results, we see that recession CEOs have the same tenure in their CEO positions as non-recession CEOs; so any results that we find on the differences in CEO styles are not driven by their horizon with their firms. In a further analysis, we ask whether recession CEOs manage firms differently in recessions or non-recessions. It is possible that recession CEOs manage firms more efficiently in recessions and perform better in such difficult periods, while non-recession CEOs are better at managing firms in non-recessions. However, our results indicate that recession CEOs do not perform differently in recessions and non-recessions.[31] This result supports the notion that managerial styles, once formed, are

[30] We also look at several additional corporate policy variables and generally do not find a significant impact of recession CEOs on them (see Table B6 in Appendix B). An interesting result is that recession CEOs have lower cash holdings. Based on the precautionary motive for cash holdings (Bates, Kahle and Stulz 2009), this result suggests that recession CEOs are less conservative. However, the tax-based explanation of cash holdings suggests that firms hold cash in their foreign subsidiaries because of the tax costs associated with repatriating foreign income (Foley, Hartzell, Titman and Twite 2007). Thus, the result that recession CEOs hold less cash is consistent with our finding that recession CEOs engage in less aggressive tax avoidance. Disentangling these two explanations is beyond the scope of this paper.

[31] Specifically, we create a dummy for whether the firm-year is a recession year (based on the NBER business cycle dating database), and we interact it with the recession CEO dummy we originally have. We rerun all regressions in Table 6 with the recession year dummy, the recession CEO dummy, and the interaction term of these two. The coefficients on the recession CEO dummy remain similar to those reported in Table 6, but we do not find any significant coefficient for the interaction term. Results are similar when we define a recession year as one when the industry stock return is below the market stock return.

relatively fixed over time. In untabulated results, we also construct a variable that measures the number of recessions in a CEO's career and use it as a competing explanatory variable. The magnitudes and statistical significance of the coefficients on "Recession" remain quite similar to those reported.

5. Conclusions

The results of this paper suggest that management styles of CEOs are affected by the environment at the start of their career. In particular, we observe that beginning one's career during a recession leads to CEOs who have more conservative management styles, such as lower leverage and more cost cutting. Early career conditions also affect the career path of the manager on the way to becoming CEO and their career outcomes as measured by the size of firm they manage and the level of compensation. The data suggests that a major channel by which recessions affect CEO career outcomes is through distortions in the initial job allocation at the time of labor market entry, e.g. starting at smaller and privately held firms rather than large, public firms.

These findings can have broad implications for the managerial labor market. If the formation of CEOs and their management styles follows a time-to-build 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 might be many managers who have learned how to manage growing companies, but at the same time there could be a limited supply of managers who know how to run firms in distress or turn-around situations. While the CEO labor market might efficiently allocate managers to the firms with the highest need for a specific style at a given point in time, there might be a mismatch of the optimal skill mix over time given the time-to-build dimension of styles. A lot more research is needed to understand how executive labor markets affect the formation of management styles and what constraints might affect the matching of managers to positions in this market.

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Table 1: Descriptive Statistics

	Obs.	Mean	Median	SD
Recession	2,058	0.21	0.00	0.41
Time to CEO	2,058	22.0	23.0	9.94
Age to CEO	2,058	47.3	48.0	8.48
Num Industries	2,058	1.91	2.00	0.95
Num Firms	2,058	2.57	2.00	1.55
Num Positions	2,058	5.78	5.00	3.86
Av Tenure	2,058	3.15	2.00	3.28
Founder	2,058	0.10	0.00	0.30
Banking	2,058	0.15	0.00	0.36
Military	2,058	0.10	0.00	0.30
Consulting	2,058	0.08	0.00	0.26
Law	2,058	0.06	0.00	0.23
Politics	2,058	0.05	0.00	0.22
University	2,058	0.03	0.00	0.17
First Private	2,058	0.18	0.00	0.38
Top Ten	2,058	0.09	0.00	0.29
First Sales ($m)	2,058	3,409	714	7,754
Sales of Firm at Which CEO ($m)	1,566	3,117	936	7,224
ROA of Firm at Which CEO	1,511	0.15	0.14	0.13
Tobin's Q of Firm at Which CEO	1,536	1.76	1.28	2.95
CEO First Comp. incl. Option Grants ($000)	1,049	3,299	1,678	5,346
CEO First Comp. incl. Options Exercised ($000)	1,064	3,088	1,206	6,291

Notes: The dataset is based on a cross-section of individuals that held a CEO position at some point between 1992 and 2010 in an "Execucomp" firm. We collect information on CEOs' background and career path from the Biography in Context (formerly Biography Resource Center), Bloomberg, Forbes, and the proxy filings of the company itself. We find (some) background information for about 80% of these "Execucomp" CEOs. In the reported tests on CEO careers, we only include 2,058 CEOs who have a relatively complete and continuous career profile. Data on sales, ROA and Tobin's Q are obtained from Compustat; compensation data are obtained from Execucomp. All dollar values are converted into 1983 constant dollars. The values of sales and assets are in millions; and CEO compensation data are in thousands. Details on the definition and construction of the variables reported in the table are available in Appendix A.

Table 2: Distribution of Age at Labor Market Entry

Age	Frequency	Percentage	Cumulative Percentage
19	12	0.7	0.7
20	17	1.1	1.8
21	57	3.5	5.3
22	151	9.4	14.7
23	197	12.2	26.9
24	**342**	**21.2**	**48.1**
25	262	16.2	64.3
26	213	13.2	77.5
27	160	9.9	87.4
28	96	5.9	93.3
29	60	3.7	97.0
30	48	3.0	100.0
Total	1,615	100	

Notes: The sample is the CEO-level dataset as described in Section 2.1 and Table 1. It is important here to base the starting age on the first full-time job that managers have. We do not count internships or short-term jobs as initial job allocations. The number of observations is less than that in Table 1 due to missing information on starting years for some CEOs.

Table 3: Recession and CEO Careers

Panel A: Career Path

	(1) Time to CEO	(2) Age to CEO	(3) Num Industries	(4) Num Firms	(5) Num Positions	(6) Av Tenure	(7) Founder
Recession	-1.549***	-0.907**	-0.128**	-0.137*	-0.421**	0.367*	0.003
	(0.550)	(0.449)	(0.052)	(0.082)	(0.214)	(0.193)	(0.017)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2,058	2,058	2,058	2,058	2,058	2,058	2,058
Adj. R^2	0.098	0.162	0.043	0.044	0.018	0.117	0.009

Panel B: Early Experience

	(1) Banking	(2) Military	(3) Consulting	(4) Law	(5) Politics	(6) University	(7) First Private	(8) Top Ten	(9) First Sales
Recession	-0.007	-0.006	-0.025*	-0.009	-0.001	0.000	0.043*	-0.031**	-0.290**
	(0.020)	(0.016)	(0.014)	(0.012)	(0.012)	(0.009)	(0.023)	(0.014)	(0.124)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	No	No	No	No	No	No	No	Yes	Yes
Obs.	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058
Adj. R^2	0.001	0.052	0.003	-0.001	0.001	0.003	0.000	0.204	0.043

Notes: The sample is the CEO-level dataset as described in Section 2.1 and Table 1. Details on the definition and construction of the variables reported in the table are available in Appendix A. Data on sales is log transformed. Decade fixed effects are based on the decade in which the individual was born. Industry fixed effects are one-digit SIC dummies for the industry in which the individual started his career. We code consulting and law firms as separate industries. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 4: Recession and Type of Firm at Which Became CEO

	(1) Sales of Firm at Which CEO	(2) ROA of Firm at Which CEO	(3) Tobin's Q of Firm at Which CEO	(4) CEO First Comp. incl. Option Grants	(5) CEO First Comp. incl. Options Exercised	(6) CEO First Comp. incl. Option Grants	(7) CEO First Comp. incl. Options Exercised
Recession	-0.234**	0.002	-0.290	-0.109	-0.174**	-0.062	-0.112*
	(0.112)	(0.007)	(0.208)	(0.080)	(0.088)	(0.061)	(0.065)
Assets						0.187***	0.233***
						(0.033)	(0.034)
Sales						0.229***	0.226***
						(0.038)	(0.037)
ROA						1.686***	3.790***
						(0.410)	(0.422)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,566	1,511	1,536	1,049	1,064	1,049	1,064
Adj. R^2	0.021	0.034	0.018	0.025	0.023	0.392	0.454

Notes: The sample is the CEO-level dataset as described in Section 2.1 and Table 1. Details on the definition and construction of the variables reported in the table are available in Appendix A. Data on sales, assets and CEO compensation are all log-transformed. Decade fixed effects are based on the decade in which the individual was born. Industry fixed effects are one-digit SIC dummies for the industry in which the individual started his career. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 5: Impact of the First Job

Panel A: Career Path

	(1) Time to CEO	(2) Age to CEO	(3) Num Industries	(4) Num Firms	(5) Num Positions	(6) Av Tenure	(7) Founder
Recession	-1.160**	-0.711	-0.085*	-0.087	-0.280	0.255	-0.010
	(0.527)	(0.438)	(0.047)	(0.078)	(0.207)	(0.190)	(0.017)
First Sales	0.977***	0.550***	0.111***	0.138***	0.444***	-0.265***	-0.029***
	(0.093)	(0.076)	(0.009)	(0.016)	(0.038)	(0.030)	(0.003)
First Private	-0.307	-0.356	0.179***	0.630***	0.469**	-0.380**	0.043**
	(0.545)	(0.464)	(0.045)	(0.088)	(0.212)	(0.175)	(0.019)
Banking	1.620***	0.595	0.354***	0.459***	0.000	0.184	-0.004
	(0.521)	(0.467)	(0.058)	(0.097)	(0.229)	(0.182)	(0.018)
Consulting	2.068***	0.013	0.974***	1.046***	1.324***	-0.846***	-0.036*
	(0.687)	(0.602)	(0.078)	(0.130)	(0.340)	(0.174)	(0.020)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	No	No	No	No	No	No	No
Obs.	2,058	2,058	2,058	2,058	2,058	2,058	2,058
Adj. R^2	0.146	0.182	0.166	0.101	0.079	0.139	0.054

Panel B: Type of Firm at Which Became CEO

	(1) Sales of Firm at Which CEO	(2) ROA of Firm at Which CEO	(3) Tobin's Q of Firm at Which CEO	(4) CEO First Comp. incl. Option Grants	(5) CEO First Comp. incl. Options Exercised	(6) CEO First Comp. incl. Option Grants	(7) CEO First Comp. incl. Options Exercised
Recession	-0.127	-0.001	-0.255	-0.076	-0.146*	-0.054	-0.112*
	(0.104)	(0.007)	(0.168)	(0.078)	(0.087)	(0.061)	(0.066)
First Sales	0.312***	-0.003	0.024	0.095***	0.091***	0.011	-0.005
	(0.024)	(0.002)	(0.042)	(0.017)	(0.018)	(0.014)	(0.015)
First Private	-0.206**	0.007	0.125	0.013	-0.009	0.023	0.002
	(0.101)	(0.009)	(0.115)	(0.083)	(0.088)	(0.065)	(0.069)
Banking	0.275**	-0.075***	-0.642***	0.268***	0.483***	-0.016	0.202**
	(0.117)	(0.010)	(0.148)	(0.092)	(0.099)	(0.084)	(0.088)
Consulting	0.067	-0.003	0.924	0.081	-0.051	0.112	-0.008
	(0.138)	(0.015)	(0.843)	(0.110)	(0.124)	(0.085)	(0.087)
Assets						0.202***	0.211***
						(0.036)	(0.035)
Sales						0.204***	0.238***
						(0.041)	(0.039)
ROA						1.755***	3.822***
						(0.415)	(0.424)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	No	No	No	No	No	No	No
Obs.	1,566	1,511	1,536	1,049	1,064	1,049	1,064
Adj. R^2	0.172	0.039	0.018	0.057	0.066	0.383	0.449

Notes: The sample is the CEO-level dataset as described in Section 2.1 and Table 1. Details on the definition and construction of the variables reported in the table are available in Appendix A. Data on sales, assets and CEO compensation are all log-transformed. Decade fixed effects are based on the decade in which the individual was born. Industry fixed effects are one-digit SIC dummies for the industry in which the individual started his career. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 6: Recession and Management Styles

	(1) Capex	(2) R&D	(3) SG&A	(4) Leverage	(5) Working Capital	(6) Effective Tax Rate	(7) Return Volatility	(8) ROA	(9) OROA
Recession	-0.004**	-0.004***	-0.012**	-0.008**	-0.017**	0.018***	-0.040***	-0.005	-0.005
	(0.002)	(0.001)	(0.006)	(0.004)	(0.007)	(0.006)	(0.010)	(0.004)	(0.003)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	35,223	37,225	37,206	36,234	37,035	33,030	36,635	37,077	37,175
Adj. R^2	0.397	0.649	0.654	0.550	0.457	0.156	0.515	0.392	0.323

Notes: The sample is a firm-year level dataset covering a given firm over the years a given individual was the CEO of that firm. We only include CEOs who have been in their position at a firm for at least three years; and we exclude CEOs of financial, insurance, and real estate firms, as well as CEOs of regulated utilities. Our final sample includes 4,152 CEOs. Financial information of these firm-year observations is obtained from Compustat, and data on stock returns is obtained from CRSP. Included controls are as follows: column (1): Cash Flows and lagged Tobin's Q; columns (2) and (3): Cash Flows and ROA; column (4): Cash Flows, ROA, and lagged Assets; column (5): Cash Flows and ROA; column (6): Tax Loss Carry-Forward (TLCF) and lagged Assets; columns (8) and (9): Sales. Details on the definition and construction of the variables reported in the table are available in Appendix A; summary statistics are presented in Appendix B. Decade fixed effects are based on the decade in which the individual was born. Robust standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Appendix A: Variable Definitions

Table A1: Variables Related to CEO Careers

Recession	A dummy for whether the individual's first job was started in a recession
Time to CEO	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	Age at which the individual first became CEO
Num Industries	Number of industries a manager was employed in before becoming CEO for the first time
Num Firms	Number of firms a manager was employed in before becoming CEO for the first time
Num Positions	Number of positions the individual held before becoming CEO for the first time
Av Tenure	Number of years a manager stayed in a given position, averaged over all positions before becoming CEO for the first time
Founder	A dummy for whether the CEO is the founder of the firm
Banking	A dummy for whether the individual had any experience in a banking firm before becoming CEO for the first time
Military	A dummy for whether the individual had any military experience before becoming CEO for the first time
Consulting	A dummy for whether the individual had any experience in a consulting firm before becoming CEO for the first time
Law	A dummy for whether the individual had any experience in a law firm before becoming CEO for the first time
Politics	A dummy for whether the individual held any political office before becoming CEO for the first time
University	A dummy for whether the individual had any academic experience before becoming CEO for the first time
First Private	A dummy for whether the first job the individual held was in a private firm
Top Ten	A dummy for whether the first job the individual held was in a firm that ranks within the top ten firms from which CEOs come (i.e., IBM, GE, P&G, Arthur Andersen, Ford, GM, AT&T, McKinsey, Texas Instruments, and DuPont)
First Sales	Sales of the first public firm the individual worked at, measured in the year the individual joined that firm
Sales of Firm at Which CEO	Sales of the firm at which the manager became CEO, measured in the year before the CEO starts the position
ROA of Firm at Which CEO	ROA of the firm at which the manager became CEO, measured in the year before the CEO starts the position
Tobin's Q of Firm at Which CEO	Tobin's Q of the firm at which the manager became CEO, measured in the year before the CEO starts the position
CEO First Comp. incl. Option Grants	Total value of a manager's compensation package including option grants for the year when the manager became CEO (tdc1)
CEO First Comp. incl. Options Exercised	Total value of a manager's compensation package including options exercised for the year when the manager became CEO (tdc2)

Table A2: Variables Related to CEO Management Styles

Capex	Capital expenditures (capx) over lagged total assets (at)
R&D	R&D expenditures (xrd) over lagged total assets (at); as in other studies (e.g., Coles, Daniel and Naveen 2006), we set R&D equal to zero when it is missing from Compustat
SG&A	Selling, general, and administrative expenses (xsga) over lagged total assets (at)
Leverage	Long-term debt (dltt) plus debt in current liabilities (dlc) over the market value of assets, where the market value of assets equals the book value of assets (at) plus the market value of common equity (prcc_f*csho) less the sum of the book value of common equity (ceq) and balance sheet deferred taxes (txdb)
Working Capital	Current assets (act) minus current liabilities (lct) over lagged total assets (at)
Effective Tax Rate	Cash tax paid (txpd) over pre-tax book income (pi) before special items (spi); effective tax rates with negative pretax income are set to missing; the remaining non-missing effective tax rates are winsorized (reset) so that the largest observation is 1 and the smallest is 0
Return Volatility	Natural logarithm of the standard deviation of daily stock returns over the fiscal year
ROA	Earnings before depreciation, interest, and tax (ebitda) over lagged total assets (at)
OROA	Cash flow (ib + dp) over lagged total assets (at)
M&A	Total number of acquisitions in the fiscal year (data obtained from SDC)
Interest Coverage	Natural logarithm of the ratio of earnings before depreciation, interest, and tax (ebitda) over interest expenses (xint)
Cash Holdings	Cash and short-term investments (che) over lagged total assets (at)
Dividends	The sum of common dividends (dvc) and preferred dividends (dvp) over earnings before depreciation, interest, and tax (ebitda)
Diversification	Total number of business segments
Profit Margin	Earnings before depreciation, interest, and tax (ebitda) over sales (sale)
Accounting Conservatism	A firm-year measure of accounting conservatism estimated following Khan and Watts (2009)
Long-Term Assets	Total long-term assets (at - act) over lagged total assets (at)
Asset Turnover	Sales (sale) over lagged total assets (at)
Assets	Natural logarithm of total assets (at)
Sales	Natural logarithm of sales (sale)
Cash Flows	The sum of earnings before extraordinary items (ib) and depreciation (dp) over lagged total assets (at)
Tobin's Q	The market value of assets (at + prcc_f*csho - ceq - txdb) divided by the book value of assets (at)
TLCF	A dummy for whether the firm has a positive value of tax loss carry-forward (tlcf)

Appendix B: Additional Tables

Table B1: Univariate Statistics on Overall Differences between Recession and Non-Recession CEOs

	Recession CEOs		Non-Recession CEOs		Differences
	Obs.	Mean	Obs.	Mean	
Time to CEO	438	20.8	1620	22.3	-1.6***
Age to CEO	438	46.4	1620	47.6	-1.2***
Num Industries	438	1.80	1620	1.94	-0.15***
Num Firms	438	2.44	1620	2.60	-0.16*
Num Positions	438	5.50	1620	5.85	-0.36*
Av Tenure	438	3.29	1620	3.11	0.18
Founder	438	0.10	1620	0.10	-0.01
Banking	438	0.14	1620	0.15	-0.01
Military	438	0.09	1620	0.10	-0.02
Consulting	438	0.05	1620	0.08	-0.03*
Law	438	0.05	1620	0.06	-0.01
Politics	438	0.05	1620	0.05	0.00
University	438	0.03	1620	0.03	-0.01
First Private	438	0.21	1620	0.17	0.04*
Top Ten	438	0.06	1620	0.10	-0.04**
First Sales ($m)	438	2963	1620	3529	-567
Sales of Firm at Which CEO ($m)	335	2902	1231	3176	-273
ROA of Firm at Which CEO	320	0.14	1191	0.15	0.00
Tobin's Q of Firm at Which CEO	327	1.59	1209	1.81	-0.22
CEO First Comp. incl. Option Grants ($000)	234	2959	815	3396	-437
CEO First Comp. incl. Options Exercised ($000)	238	2941	826	3131	-189

Notes: The sample is the CEO-level dataset as described in Section 2.1 and Table 1. We perform two-tailed t-test of differences in means. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Details on the definition and construction of the variables reported in the table are available in Appendix A.

Table B2: Recession and CEO Career Path (Larger Sample)

	(1) Time to CEO	(2) Age to CEO
Recession	-0.910***	-0.613**
	(0.284)	(0.244)
Decade FE	Yes	Yes
Industry FE	Yes	Yes
Obs.	5,312	5,312
Adj. R^2	0.181	0.262

Notes: The sample is the entire CEO-level dataset as described in Section 2.1. Details on the definition and construction of the variables reported in the table are available in Appendix A. Decade fixed effects are based on the decade in which the individual was born. Industry fixed effects are one-digit SIC dummies for the industry in which the individual started his career. We code consulting and law firms as separate industries. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table B3: Recession and Type of Firm at Which Became CEO (Larger Sample)

	(1) Sales of Firm at Which CEO	(2) ROA of Firm at Which CEO	(3) Tobin's Q of Firm at Which CEO	(4) CEO First Comp. incl. Option Grants	(5) CEO First Comp. incl. Options Exercised	(6) CEO First Comp. incl. Option Grants	(7) CEO First Comp. incl. Options Exercised
Recession	-0.134**	0.002	-0.081	0.018	-0.085*	0.023	-0.073**
	(0.061)	(0.004)	(0.075)	(0.044)	(0.045)	(0.033)	(0.034)
Assets						0.194***	0.187***
						(0.022)	(0.022)
Sales						0.236***	0.235***
						(0.023)	(0.023)
ROA						1.003***	2.256***
						(0.168)	(0.170)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	4,808	4,566	4,322	3,414	3,453	3,414	3,453
Adj. R^2	0.048	0.050	0.032	0.032	0.034	0.427	0.437

Notes: The sample is the entire CEO-level dataset as described in Section 2.1. Details on the definition and construction of the variables reported in the table are available in Appendix A. Data on sales, assets and CEO compensation are all log-transformed. Decade fixed effects are based on the decade in which the individual was born. Industry fixed effects are one-digit SIC dummies for the industry in which the individual started his career. We code consulting and law firms as separate industries. Robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table B4: Summary Statistics of Variables Related to CEO Management Styles

	Obs.	Mean	Median	SD
Capex	37,751	0.080	0.056	0.085
R&D	37,754	0.038	0.000	0.075
SG&A	37,749	0.295	0.235	0.268
Leverage	37,287	0.157	0.122	0.149
Working Capital	37,519	0.289	0.248	0.365
Effective Tax Rate	34,169	0.217	0.206	0.208
Return Volatility	36,635	-3.653	-3.674	0.447
ROA	37,407	0.169	0.160	0.137
OROA	37,550	0.107	0.109	0.120

Notes: The sample is a firm-year level dataset covering a given firm over the years a given individual was the CEO of that firm. We only include CEOs who have been in their position at a firm for at least three years; and we exclude CEOs of financial, insurance, and real estate firms, as well as CEOs of regulated utilities. Our final sample includes 4,152 CEOs. Financial information of these firm-year observations is obtained from Compustat, and data on stock returns is obtained from CRSP. Details on the definition and construction of the variables reported in the table are available in Appendix A.

Table B5: Depth of Recession and Management Styles

	(1) Capex	(2) R&D	(3) SG&A	(4) Leverage	(5) Working Capital	(6) Effective Tax Rate	(7) Return Volatility	(8) ROA	(9) OROA
Depth_Recession	-0.005**	-0.005***	-0.017**	-0.009**	-0.021**	0.019**	-0.051***	-0.006	-0.006
	(0.002)	(0.002)	(0.008)	(0.005)	(0.010)	(0.007)	(0.012)	(0.005)	(0.004)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	35,223	37,225	37,206	36,234	37,035	33,030	36,635	37,077	37,175
Adj. R^2	0.396	0.648	0.654	0.550	0.457	0.155	0.514	0.392	0.323

Notes: Depth_Recession is defined as the number of months the recession lasted (rescaled to range from 0 to 1). The sample is a firm-year level dataset covering a given firm over the years a given individual was the CEO of that firm. We only include CEOs who have been in their position at a firm for at least three years; and we exclude CEOs of financial, insurance, and real estate firms, as well as CEOs of regulated utilities. Our final sample includes 4,152 CEOs. Financial information of these firm-year observations is obtained from Compustat, and data on stock returns is obtained from CRSP. Included controls are as follows: column (1): Cash Flows and lagged Tobin's Q; columns (2) and (3): Cash Flows and ROA; column (4): Cash Flows, ROA, and lagged Assets; column (5): Cash Flows and ROA; column (6): Tax Loss Carry-Forward (TLCF) and lagged Assets; columns (8) and (9): Sales. Details on the definition and construction of the variables reported in the table are available in Appendix A; summary statistics are presented in Appendix B. Decade fixed effects are based on the decade in which the individual was born. Robust standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table B6: Recession and Management Styles (Additional Variables)

	(1) M&A	(2) Interest Coverage	(3) Cash Holdings	(4) Dividends	(5) Diversification	(6) Profit Margin	(7) Accounting Conservatism	(8) Long-Term Assets	(9) Asset Turnover
Recession	-0.034	0.049	-0.013**	-0.001	0.063	0.007	-0.001	-0.000	-0.028
	(0.065)	(0.039)	(0.006)	(0.003)	(0.097)	(0.005)	(0.002)	(0.007)	(0.021)
Decade FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	12,538	30,916	37,209	37,233	38,907	38,391	31,622	35,635	37,510
Adj. R^2	0.194	0.465	0.438	0.422	0.330	0.461	0.682	0.331	0.562

Notes: The sample is a firm-year level dataset covering a given firm over the years a given individual was the CEO of that firm. We only include CEOs who have been in their position at a firm for at least three years; and we exclude CEOs of financial, insurance, and real estate firms, as well as CEOs of regulated utilities. Our final sample includes 4,152 CEOs. Financial information of these firm-year observations is obtained from Compustat; data on mergers and acquisitions is obtained from SDC Platinum; and data on stock returns is obtained from CRSP. Included controls are as follows: column (1): Cash Flows, ROA, and lagged Assets; column (2): lagged Assets; column (3): Cash Flows and ROA; column (4): lagged Assets; column (7): Sales, Leverage, and Tobin's Q. Details on the definition and construction of the variables reported in the table are available in Appendix A. Decade fixed effects are based on the decade in which the individual was born. Robust standard errors clustered at the firm level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.