

Preliminary
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Which CEO Characteristics and Abilities Matter?

by

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Abstract

Using a detailed dataset with assessments of CEO candidates for companies involved in private equity (PE) transactions, including both buyout (LBO) and venture capital (VC) deals, we study how CEOs' characteristics and abilities relate to hiring decisions, PE investment decisions, and subsequent performance. The candidates are assessed on more than forty individual characteristics in seven general areas – leadership, personal, intellectual, motivational, interpersonal, technical and specific. In general, all characteristics and abilities are found to be highly correlated. For both LBO and VC firms, outside CEO candidates are more highly rated than incumbents. Both LBO and VC firms are more likely to hire and invest in more highly rated and talented CEOs, and the investors also value “soft” or team-related skills in the hiring decisions. However, these skills are not necessarily associated with greater success. For LBO deals in particular, “hard” abilities and execution skills predict success. Finally, we find that incumbents are no more likely to succeed than outside CEOs, holding observable talent and ability constant.

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I. Introduction

Given their leadership positions and compensation, CEOs likely have a significant impact on the success of the companies they run. While a great deal has been written about CEO compensation and turnover and their relations to firm performance, little work in economics and finance has focused on which types of CEOs affect firm performance and firm behavior, nor on how they do so. One notable exception is Bertrand and Schoar (2003) who consider the importance of a CEO's style on corporate decision making. They study managers who move from one firm to another, and find evidence consistent with managers having different styles, different behavior, and different performance. Bertrand and Schoar, however, do not specify or estimate what defines the different styles and characteristics.¹

This paper provides new evidence on the particular CEO characteristics and abilities that relate to hiring, investor decisions, and firm performance. To do this, we rely on detailed assessments of over 300 CEO candidates for positions in firms funded by private equity (PE) investors – both buyout (LBO) and venture capital (VC) investors. The assessments are based on four-hour structured interviews that were performed from 2000 to 2006 by a firm that assesses top management candidates for PE firms. The typical assessment is a 20 to 40 page document that includes detailed biographical information on the candidate from childhood through current job experience. The data include quantitative and qualitative information about each manager's education and employment history as well as assessments of a wide range of personal skills and attributes such as whether the candidate is a "team player," "aggressive," "attention to detail," and so forth.

With these data, we make three contributions. First, we extend the set of measured CEO characteristics and abilities. Most of the existing economics, finance, and management literature focuses on directly observable characteristics, such as CEOs' "education," "functional background," and "age." Hambrick and Mason (1984) stress that these observable characteristics are, at best, proxies for

¹ See also Bloom and Van Reenen (2006) who use survey data to find that different management practices are related to firm performance and Bennedsen et al. (2007) who find that firm performance is negatively related to CEO focus.

underlying psychological factors, but they also recognize the difficulties of gathering data with these underlying factors for CEOs. We present such data.

Second, the existing literature is mainly concerned with the relation between CEO identity (i.e., fixed effects) and investment policy, financial policy, organizational strategy, and performance (see, e.g., Bertrand, Schoar, 2003). We take a first step towards understanding why a particular CEO might have those effects: What is the relation of particular CEO candidate characteristics and abilities to whether the CEO is hired? Do the characteristics and abilities that predict hiring also predict performance? How are these characteristics perceived by the financial markets and related to investment decisions by investors? And are different characteristics important for different types of companies or investments (i.e., companies funded by VC versus LBO firms)?

Finally, we consider the related question of the importance of firm specific knowledge or ability versus general ability by comparing inside and outside CEO candidates. Several theories about the trade-off between firm specific ability and general ability predict that outside candidates have higher abilities, on average, but there is very limited evidence about whether this is true in practice, nor is there any evidence on the particular dimensions where this trade-off is more relevant (see Frydman (2006) and Murphy and Zabojnik (2004)).

We report CEO assessments in more than 40 specific characteristics and abilities. These characteristics fall in seven general areas – leadership, personal, intellectual, motivational, interpersonal, technical and functional. Further, we classify these characteristics as being either (1) “soft / team related,” (2) “neutral,” or (3) “hard / individual” capabilities. Finally, to extract the main patterns of variation in the characteristics, we use a principal component analysis and find that two components are particularly important. These have intuitive interpretations: the first loads positively on all individual abilities and thus measures overall talent; the other loads positively on soft, team related abilities (teamwork, open to criticism, treats people with respect), and negatively on hard, individual capabilities (aggressive, fast mover, efficient).

In our empirical analysis, we find that the ratings for outside CEOs are higher than the ratings for incumbent CEOs for both buyout and VC-funded firms. This suggests that investors and firms trade off general skills and ability against firm-specific skills and knowledge.

We then consider determinants of hiring and investment decisions. PE firms – both LBO and VC firms – are more likely to hire and invest in more highly rated / talented CEOs, particularly for outsider hires. However, insider CEOs are significantly more likely to be hired, holding their skill constant. In other words, investors and firms appear to trade off general or observable abilities against firm-specific skills and knowledge.

Next, we consider the relation between a CEOs' ratings and their subsequent success. We measure success using evaluations from the PE firms (when we can obtain them) and our own assessments of success from publicly available data. For LBO firms, success is significantly positively related to a number of individual measures of talent. They tend to be the hard measures (“efficient,” “organized,” “aggressive,” “detailed,” “follows through,” “persistent,” “proactive,” “sets high standards,” and “holds people accountable”), not the soft / team related ones. Consistent with this, we find that success is significantly positively related to the general talent component and negatively related to the second component (soft team player versus hard, individual player) in regressions that include the principal components. For VCs, in many specifications, success is negatively (not positively) related to the individual measures of talent. This is consistent with a large role of the viability of the business for earlier stage venture capital funded businesses (see Kaplan, Sensoy, Stromberg (2006)). It may also reflect the fact that many of the VC-funded companies in the sample are funded during the tech boom in the late 1990s and early 2000s. Many of those businesses were not viable. Interestingly, for VC firms, we again find a significantly negative relation between success and the second principal component in regressions that use the principal components, suggesting, again, that hard skills are more relevant for success than soft skills. Finally, for both VCs and LBOs, we do not find that insiders are more likely to succeed, holding ability constant.

Our research is perhaps most closely related to Collins (2001). Studying a sample of eleven CEOs of companies with outstanding performance, he identifies “Level 5” leadership as building “enduring greatness.” According to Collins, common traits of the “Level 5” leaders are compelling modesty; giving credit to others and taking blame on themselves; showing unwavering resolve, workmanlike diligence and fanatically driven; and building strong teams. One concern with this study is the potential for ex-post selection bias. Collins (2001) chooses his sample of CEOs based on superior past performance, and performance volatility may introduce some randomness in his sample (notably, many of the CEOs attribute their success to luck). Our analysis complements and extends Collins (2001) by identifying and analyzing a larger sample of CEO candidates chosen ex-ante.

Two limitations must be kept in mind when interpreting our results. First, we do not attempt to resolve the problem of endogenous matching of candidates and companies (Ackerberg, Botticini, 2002). This endogeneity problem arises when characteristics that are unobserved in the data affect which candidates are employed by particular companies. Given the nature of our data, we believe we observe practically all information about the candidates that is used for the employment decisions, reducing this problem. However, unobserved firm characteristics may affect the interpretation of our results. Second, our result may not extrapolate well to CEO candidates and firms in different situations. Companies funded by PE investors may not be a representative sample of companies, and the candidates we observe may not be representative of the average CEO candidate.

II. Data

A. Assessments

We rely on detailed assessments of 313 CEO candidates for positions in firms funded by private equity (PE) investors, consisting of both venture capitalists (VC) and buyout (LBO) investors. The assessments are performed from 2000 to 2006 by ghSMART, a firm that is specialized in assessing top management candidates, and the circumstances of the assessments vary on three primary dimensions. First, the PE firm may or may not already have invested in the company. Second, the CEO candidate may

be the incumbent CEO, may work for the company but not as CEO, or may be an outside candidate. Finally, because young companies may require executives with different skills than more mature companies, we divide the assessments into those made for investments by VC investors and those for buyout investors.

The assessments are typically 20 to 40 page documents that include detailed information on the candidates' life, from childhood through current job experiences. They are based on structured interviews with the candidates that are of roughly four hours in duration and are performed by professional interviewers. The data include quantitative and qualitative information about the managers' education and employment histories as well as assessments of a wide range of personal skills and characteristics, such as whether the candidate is a "team player," "aggressive," "attentive to details," and so forth.

The typical assessment classifies the CEO candidate on more than 40 dimensions in seven general classifications – "leadership," "personal," "intellectual," "motivational," "interpersonal," "technical," and "specifics." Descriptions of the assessed individual characteristics are presented in table 1. The technical and specific classifications differ somewhat from the others. "Technical" measures the type of experience the candidate has – in finance, marketing, etc. – at least as much as it measures the candidate's ability in those areas. "Specific" measures the candidate's abilities in areas that are specific to the particular deal, and information about these characteristics is less consistent across candidates. Generally, "technical" and "specific" characteristics are less important, and they are omitted in some of the following analysis.

In the discussion, we informally refer to characteristics as soft, neutral or hard. Based on the descriptions in table 1, we regard "Develops People," "Treats People with Respect," "Flexibility," "Integrity," "Listening," "Open to Criticism," and "Teamwork" as soft or team-related skills. We view "Removes Underperformers," "Efficiency," "Aggressive," "Moves Fast," "Persistence," "Sets High Standards," "Proactive," "Work Ethic," "Holds People Accountable" as hard skills. We classify "Network," "Hires A Players," "Calm Under Pressure," "Organization," "Follows through on Commitments," "Brainpower," "Analytical," "Strategic," "Creative," "Attention to Detail," "Enthusiasm," "Writing," "Oral Communication," and "Persuasion" as neutral.

For each of the characteristics ghSMART assigns a letter grade to the CEO candidate, ranging from D (lowest) to A+ (highest). We rescale these grades into four categories. We classify grades of B or below as 1. ghSMART reports that grades of B or below are quite negative. We combine these grades because there are relatively few grades below B. We classify grades of A and A+ as 4. ghSMART reports that such grades are very positive. We combine them because there are relatively few grades of A+. We classify grades of B+ as 2 and grades of A- as 3. We obtain qualitatively similar results when we do not combine grades. For each characteristic, the mean rating is given in table 2.

The ratings of the candidates' characteristics are necessarily somewhat subjective, but ghSMART attempt to structure the interviews to ensure the maximum consistency between interviews. All interviews follow the same specified structure, and are undertaken by interviewers with professional backgrounds. According to ghSMART, about one half of the interviewers hold doctoral degrees while the rest has backgrounds in top MBA programs and strategy consulting firms (such as McKinsey & Co., Bain, and BCG). According to ghSMART, their internal testing has found a high degree of consistency across assessments performed by different interviewers. To control for possible interviewer biases, we use interviewer fixed effects in some of our analyses (not reported). When we do so, the regressions coefficients are largely unchanged.

When asked whether it is possible for executives to “game” the interview by providing answers that the candidates believes are “right,” ghSMART provided two main reasons why this is difficult. First, VC and buyout investors typically conduct detailed reference checks on the CEO candidates of their portfolio companies to verify the information in the assessments. A candidate who gives misleading or overly “rosy” answers risks exposure through comparison with the information from the reference checks. Candidates are aware that reference checks are conducted, and this provides some motivation to be truthful. According to ghSMART, detailed reference checks are conducted for more than 95% of the assessed CEO candidates. Further, ghSMART has found that it is difficult to “game” the questions consistently in the course of a four-hour interview with an experienced interviewer.

B. Corporate Decisions and Performance

In addition to the candidates' characteristics, we also code three outcome measures: (1) whether the CEO candidate is hired; (2) whether the PE firm invests in the firm; and (3) whether the CEOs who are hired are successful.

We collect this information in two ways. First, either ghSMART or we approach the PE firms to obtain post-assessment information. We ask the PE firm whether it made the investment. If the PE firm made the investment, we ask which candidate was hired. Finally, if the PE firm invested and one of the CEO candidates was hired, we ask whether the CEO was successful. We also ask if the investment had been successful or unsuccessful, as well as for any available quantitative success measures. We obtain responses from PE firms representing 146 of the 313 CEO candidates in our sample. Of these 146 candidates, 106 were hired, and the PE firms provide performance evaluations for 82 of these CEOs. The PE firms reported that 45% were successful, 37% were not successful, and 18% had mixed success.

To complement the information provided by the PE firms, we also use public sources to assess whether the investment was made, whether the CEO was hired, and whether the CEO was successful. These sources include CapitalIQ, Zoominfo.com, VentureOne, Lexis-Nexis, company websites and the PE firms' websites. We classify CEOs as successful, if the CEO led the company to a clearly favorable exit such as an IPO or sale to another company, if the company had a series of definitively positive press releases regarding its operations or similar positive evidence. We classify CEOs as unsuccessful, if the company went bankrupt, was sold to another firm under distress, or had a series of definitively unfavorable press releases regarding its operations or similar negative evidence. We classify the CEO as mixed if the company that the CEO ran did not have an exit of any form (IPO, sale, liquidation, etc.) and / or the company has press releases that are not informative about its success.

Of the 313 CEOs, we determine that 225 were hired. When we merge the PE firms' answers with the information that we collected from the sources discussed above, we have estimates on the success of

all 225 CEOs. We always use the PE firms' answers when available. Of these 225 CEOs: 41 are classified as unsuccessful, 90 are classified as mixed, and 94 are classified as successful.

Naturally, the information collected from public sources contains more noise than the information obtained directly from the PE firms. To ascertain the accuracy of the classifications, we compared the classifications obtained from the public sources with the classifications we obtained from the PE firms. We find a correlation of the two classifications that is significant at the 1% level, suggesting that the classifications using public sources are informative.

III. Distribution and Aggregation of Managerial Characteristics

A. Means and Medians

Table 2 presents the average rating of the characteristics for all the CEO candidates, and separately for candidates interviewed for buyout and VC investors. We create a summary measure for each of the seven general areas by averaging the rating of the individual characteristics or skills in that area. We use averages, because some candidates are not rated on all characteristics.

Panel A in table 2 indicates that there is a fair amount of variation in the ratings of the different CEO candidates. The candidates are rated more highly on personal and motivational characteristics and lower on leadership, specifics, and intellectual characteristics.

The average classifications for buyout firm candidates are greater than those for VC candidates for all of the summary measures except intellectual. The difference is largest for the "motivational" and "interpersonal" summary measures, and for these two summary measures the difference is statistically significant at the 10% level. This is suggestive that entrepreneurs may have less general management ability than professional managers.

There are also notable differences in the individual characteristics. VC firm CEO candidates have lower ratings on "treats people with respect," "flexibility," "follows through on commitments," "attention to detail," "persistence," "listening skills," "open to criticism," and on "industry knowledge"

and “achieving revenue targets” (the final two are not reported in table 2). But they have higher ratings on “brainpower,” “strategic vision,” and “academic performance” – both higher SATs and higher high school class rank (unreported in table 2). Because of the large number of included characteristics, we are cautious when interpreting a few of those as being statistically significant. Even if the data were random, some characteristics would be significant by random chance. Nevertheless, the pattern is suggestive. Buyout CEOs appear to score higher on characteristics related to a broader range of managerial and executive functions while VC CEOs appear to score higher on characteristics related to intelligence, vision, and strategy.

Table 2 further reports summary ratings for CEO candidates that are incumbents and outside candidates. There are clear differences in these ratings. Outside candidates score at least as high as incumbents on every one of the summary measures. The differences are larger and statistically significant for characteristics relating to “leadership,” “interpersonal,” and “specifics.”

Turning to the individual characteristics, outside candidates score significantly higher on “hires A players,” “develops people,” “efficiency,” “analytical skills,” “sets high standards,” “listening skills,” “oral communication,” “holds people accountable,” “industry knowledge,” “top-grading management,” and “achieving financial and non-financial targets.” The differences between insiders and outsiders tend to be greater for buyout-funded companies than for VC-funded companies, although they are present for both types of companies.

These results are consistent with a number of explanations. First, it is possible, if not likely, that outside candidates are considered when internal candidates are not performing well. Second, the results are consistent with Hellmann and Puri (2002) and Kaplan and Stromberg (2004) who present evidence that PE firms upgrade the talent in the firms in which they invest. Third, in some cases the incumbent manager may have control over who can invest in the company. As a result, a private equity investor must maintain the incumbent management, even if this management is not ideal, or not invest at all. Finally, concerns about employee moral and political turmoil may prompt investors to keep the incumbent management. All of these are consistent with outsiders being more talented than incumbents.

B. Correlations and Aggregation

The individual ratings are highly correlated. On average, when a candidate scores well on one characteristic, the candidate tends to score well on all the others. For the seven summary characteristics, all pair-wise correlations exceed 0.38 and are significant at the 1% level. For the individual characteristics, in the leadership area, 20 of the 21 pair-wise correlations are statistically significant at the 10% level or better; in the personal area, 11 of 15; in intellectual, 8 of 10; in motivational, 10 of 10; in interpersonal, 21 of 21; and in specifics, 44 of 45. To conserve space, we do not report these correlations. The strong correlations suggest that talent, ability, or skill have some kind of general characteristic or quality that is spread across many dimensions.

The large number of highly correlated characteristics relative to the number of candidates is potentially problematic. The multicollinearity problem means that including all the individual characteristics as explanatory variables in a regression model will lead to results that are difficult to interpret. To address this problem, we apply two methods to reduce the dimensionality of the dataset. First, as described above, we aggregate the characteristics into seven general classifications – “leadership,” “personal,” “intellectual,” “motivational,” “interpersonal,” “technical / functional,” and “specifics.” This aggregation takes the average of each candidate’s rankings within each of the seven classifications, and classifies candidates according to their qualities in these seven broad sets of skills. Second, we perform a principal components analysis (see i.e. Jolliffe (2004)). This analysis extracts the main components of variation in the candidates’ characteristics, and each candidate’s loading on these characteristics can then be calculated. We calculate the principal components using the ratings in the first five general classifications. We exclude “technical / functional” and “specifics,” because more ratings are missing for these classifications, and the principal components analysis requires that the candidates are rated on *all* included characteristics. For the same reason, we also exclude “written communication” and “persistence.” One or both of these two characteristics are missing for almost 100 candidates.

Using the characteristics in the first five classifications, we calculate principal components for 277 of the 313 executives. Table 3 reports the results of this analysis. We observed that the first three components explain 47% of the variation and we focus on these below. The first two components turn out to be more important and have natural interpretations.

The first and most important component represents a general component. This component explains 28% of the variation in the ratings data. All of the individual characteristics load positively on the first component, but the table only reports loadings for characteristics that are more influential (having a coefficient greater than 0.17 in absolute value). These characteristics, a mix of soft, neutral, and hard characteristics, include “hires A players,” “develops people,” “efficiency,” “network of talented people,” “flexible,” “organization and planning,” “aggressive,” “moves fast,” “follows through,” “brainpower,” “analytical skills,” “strategic thinking,” “creative,” “proactive,” “sets high standards,” “oral communication,” “teamwork,” “persuasion,” and “holds people accountable.” It is natural, therefore, to interpret this as the component that captures general talent or ability. This is common in principal component analysis and reflects the fact, documented above, that all the characteristics tend to move together.

The second component is perhaps more interesting. Candidates who score higher on this component have higher ratings on soft skills like “treats people with respect,” “integrity,” “listening skills,” “open to criticism,” and “team work.” Candidates with a lower score on this component have higher ratings on hard skills like “aggressive,” “moves fast,” “proactive,” and “work ethic.” Interpreting these characteristics, the component appears to sort the candidates such that a high loading on the component corresponds to a candidate who can be characterized as a “consensus / team player,” whereas a low loading on this component corresponds to candidate who is arguably best characterized as “fast, aggressive, and persistent.” One would expect Jack Welch – the former CEO of General Electric who was often referred to as “Neutron Jack” – to score low on this component while his successor, Jeff Immelt, cited in Fast Company (2005) for “holding ‘dreaming sessions’ with customers, developing

‘imagination breakthrough’ teams, and the importance of ‘simplification’,” would likely score higher on this component. This component explains 12% of the variation.

The third component is harder to interpret, and it plays a smaller role below. Candidates with higher loadings on this component score higher on “removes underperformers,” “organization,” “analytical skills,” “attention to detail,” and “holds people accountable.” A candidate with a lower loading on this component scores higher on “aggressive,” “fast,” “creative,” “enthusiasm,” “proactive,” and “persuasion.” The first characteristics evoke a sense of deliberate analytic ability and organizational talent; whereas the second set of characteristics evokes a sense of being energetic and action oriented. This distinction may be interpreted as a distinction between a “think’er” and “do’er.” This component explains 7% of the variation.

Given the difficulty of interpreting increasingly marginal components, we limit the analysis to the initial three components and primarily the first two. In principal component analysis, each component’s eigenvalue is often taken as a measure of the amount of aggregate information captured by the component, and it is usually argued that components must have eigenvalues greater than one to capture meaningful patterns in the data. The initial three components all have eigenvalues greater than two.

IV. Managerial Characteristics and Corporate Decisions

A. Hiring Decisions

Next, we look at the relation between the characteristics and the decision to hire the candidate. We distinguish between candidates assessed for buyout and VC firms and between incumbent and outside candidates. Distinguishing between incumbent and outside CEOs is important because in some investments, the PE firm does not have the ability to choose an outside CEO.

Table 4 presents the correlation of the summary competency measures and CEO characteristics (and their significance levels) with a dummy variable equal to 1 if the CEO is hired. We also discuss the individual characteristics that are significant.

Overall, all of the correlations between being hired and the general classifications (in panel A) are positive with the correlations on “personal” and “motivational” being statistically significant. Separating buyout and VC deals, “personal” and “motivational” characteristics are statistically significant for buyouts while “personal” and “intellectual” are significant for VC firm CEOs.

When we look at the specific characteristics underlying the summary measures (in panel B), we find that for buyout firm CEOs, CEO hiring is significantly positively related to “moves fast,” “follow through on commitments,” “attention to detail,” “enthusiasm,” “persistence,” “industry knowledge,” and negatively related to “analytical skills” and “SAT performance.”

For VC firm CEOs, CEO hiring is significantly positively related to “integrity,” “aggressive but respectful,” “brainpower,” “written communication,” “achieving EBIT targets,” and SAT scores.

1. Incumbents versus outsiders

As mentioned above, the PE firm may sometimes be forced to hire an incumbent CEO, and the finding that incumbent CEO candidates are significantly more likely to be hired is consistent with this. At the same time, the PE firm almost always does have a choice in hiring an outside CEO. Accordingly, we present correlations between hiring decisions and CEO characteristics separately for incumbent and outside candidates.

Panel A of table 4 shows that the correlations of hiring and the summary measures are almost all greater for outside CEOs than for incumbent CEOs. The statistical significance is also higher in most cases. The six general areas that measure ability – “leadership,” “personal,” “intellectual,” “motivational,” “interpersonal,” and “specifics” are significantly correlated with hiring of outside candidates overall. (Arguably, the “technical” rating is more about a candidate’s characteristics than ability). None of the general areas is significant for incumbent candidates overall.

For buyout candidates, all but “intellectual” are significantly correlated with hiring for outside candidates while none of the areas is significant for internal candidates. For VC candidates, all of the

general areas are significantly correlated for outside candidates, while again, none is correlated with hiring for incumbent CEOs.

We also look at the individual characteristics. For buyout firms, hiring of outside CEOs is significantly correlated with “hiring A players,” “develops people,” “respect,” “integrity,” “moves fast,” “follows through,” “attention to detail,” “enthusiasm,” “persistence,” “sets high standards,” “open to criticism,” “teamwork,” “achieves revenue,” “achieves non-financial targets,” and “topgrading the management team.” Hence, for buyouts, the hiring of outside candidates is significantly positively related to 15 of the 40 characteristics or talents rated (excluding “technical” ratings), and this further indicates that outside CEOs are hired for their perceived talent. The hiring of an incumbent CEOs is positively and significantly related to “follows through on commitments,” “strategic thinking,” “enthusiasm,” and “persistence.” These characteristics do not exhibit a clear pattern. Therefore, for buyout firms there appears to be a substantial difference in how incumbent and outside CEOs are hired.

For VC firms, hiring of outside CEOs is significantly related to “efficiency,” “aggressive,” “brainpower,” “strategic,” “creative,” “sets high standards,” “open to criticism,” “written and oral communication,” “teamwork,” “achieving EBIT,” and “setting strategy.” At the same time, hiring of incumbent CEOs is related to “hiring A players,” and negatively to “creative” and teamwork. As with buyout investors, VCs appear to weight talent more when hiring outside CEOs than for internal candidates.

2. Principal components

In table 5, we present linear regressions that estimate the relation of the likelihood of being hired to the CEO candidate’s ratings on each of the three principal components. Most of the regressions also include a dummy variable for whether the candidate already works for the company, i.e. whether the candidate is an incumbent.

The regressions indicate that being hired is positively and significantly related to the candidate's loading on the first component, which captures general talent. The other components are not significant. This result holds overall and for both buyout and VC, individually.

The regressions also indicate that incumbents are more likely to be hired by both buyout and VC-funded companies, holding talent equal. As we mentioned earlier this is consistent with both types of investors placing a large value on firm specific or existing capital relative to general talent or skills. It is also consistent with the possibility that the incumbent CEO is often effectively in control of the company and, therefore, the hiring decision.

B. Investment Decisions

We next look at the relation of investment decisions to CEO characteristics. Again, we distinguish between buyout and VC CEOs, incumbent CEOs and outside CEO candidates. We also distinguish whether or not the CEOs were hired. Table 6 presents the correlation of the summary competency measures and CEO characteristics (and their significance levels) with a dummy variable equal to 1 if the private equity firm invested in the company. We also discuss the individual characteristics that appear to matter.

All of the correlations in panel A of table 6 are positive. The correlations of investing with leadership, personal, and motivation are significant overall; leadership is significant for the buyout executives while personal and motivation are significant for the VC executives.

It is arguable that investors only consider the executives they will hire in making their investment decisions. Accordingly, the table also presents the correlation between the summary measures and investing only for those candidates who are hired. All of the summary measures except for intellectual are significantly correlated with investing. Leadership, motivational and interpersonal are significant for buyouts while motivational is significant for VC candidates.

Panel B looks at incumbent executives while panel C looks at outside executives. "Leadership" remains significant for incumbent buyout executives while no variables are significant for incumbent VC

executives. For outside executives overall, “leadership” and “personal” are significant. “Leadership,” “personal” and “interpersonal” are significant for outside VC executives. All summary measures except intellectual and specifics are significant for hired outside executives overall. Personal and motivational are significant for hired buyout executives while motivational and interpersonal are significant for hired VC executives.

Although we do not report these results in a table, at the individual characteristic level, buyout firm investment is significantly correlated with “removes underperformers,” “efficiency,” “flexibility,” “integrity,” “sets high standards,” “holds people accountable,” and “achieving revenue targets.” “Teamwork” is significant at the 11% level. For candidates who were hired, investment by buyout investors is correlated with “removes underperformers,” “efficiency,” “integrity,” “follows through,” “sets high standards,” “listening skills,” “holds people accountable,” and “achieves revenue targets.”

For incumbent CEOs, buyout firm investment is significantly correlated with “removes underperformers,” “efficiency,” “flexibility,” “sets high standards,” “holds people accountable,” and “achieving revenue targets.” For outside candidates, investment is correlated with “integrity.”

At the individual characteristic level, VC firm investment is significantly correlated with “efficiency,” “calm,” “follows through,” “work ethic,” “proactive,” and “teamwork.” For candidates who were hired, VC firm investment is significantly correlated only with “work ethic.”

For incumbent CEOs, VC investment is significantly related to “analytical skills”; for outside CEOs, to “treating people with respect,” “network,” “efficiency,” “integrity,” “organization and planning skills,” “calm,” “follows through,” “oral communication,” teamwork,” and “listening skills.”

These results suggest that buyout and VC investors condition their investment decision on management quality. Buyout investors appear to condition investment more on incumbent management talent than VCs, while VC investment decisions seem more tied to CEOs they can bring in to run the company.

In table 7, we present regressions that estimate the likelihood of investment as a function of the CEO candidate's ratings on each of the three principal components. Again, most of the regressions also include a dummy variable for whether the candidate already works for the company.

The regressions indicate that investment is positively and (marginally) significantly related to the candidate's loading on the first component that we have characterized as talent in general. The other components are not significant. This result holds overall and for VC investments. The coefficient is similar for buyouts, but not significant.

For the entire sample, there is no difference in the likelihood of investment for incumbents versus non-incumbents. Incumbents are, however, significantly less likely to receive investment in VC firms.

V. Managerial Characteristics and Performance

In this section, we compare the CEO characteristics to CEO and investment success. We restrict the measurements to CEOs who were actually hired. We use three measures of success. First, we rely on direct appraisals of CEO success by the PE firms that invest and hire the CEOs. A successful CEO is given a rating of 1; a mediocre CEO, 0.5; and an unsuccessful CEO, 0. We have obtained appraisals for 33 buyout and 49 VC CEOs in this manner. Second, we rely on direct appraisals of financial success of 68 investments by the PE firms. The PE firms classify the deals as not successful, unclear, successful and very successful. Third, we combine the PE firm appraisals with those we obtain from publicly available information. We attempt to rate all CEOs who were hired. We obtain a combined total of 101 buyout and 124 VC CEO appraisals. Because many of the investments have not been exited, these ratings are likely to be quite noisy.

Panel A of table 8 presents the measures of CEO success. The average rating for buyout CEOs is 0.70 from the PE firms and 0.66 from public information. The average rating for VC CEOs from the VC firms is lower at 0.44, while the average from public sources is 0.62. For both buyouts and VCs, we obtain a lower number of unsuccessful CEOs from public sources than from the PE firms. The smaller

number of negative ratings using public information suggests that it is likely that the public information provides a coarser measure of performance than the PE firm responses.

Panel B of table 8 presents the PE firms' estimates of the financial success of the deals. Deals rated unsuccessful almost always lost money. Deals rated successful tended to return up to two times the investor's investment. Deals rated very successful tended to return more than two times the investor's investment. The buyout investments in the sample appear substantially more successful than the VC investments. This is not surprising given that a meaningful fraction of the VC investments were funded in the early 2000's, a period in which VC investments were not very successful.

A. Buyout CEOs

1. Performance using buyout firm ratings

The correlations of performance and characteristics are presented in table 9. For buyout CEOs, the PE firm appraisal is positively correlated with all the summary measures of CEO characteristics. The correlations are significant for "personal," "intellectual," and "motivational." A large number of individual CEO characteristics also are significantly correlated with success: "efficiency," "organization and planning," "follows through," "analytical skills," "attention to detail," "persistence," "proactive," "sets high standards," "holds people accountable," "topgrading management team," and "achieving EBIT targets."

These results suggest that individual CEO characteristics or skills do map into CEO success. These skills also seem to be predominantly of the hard or tough variety. There are no soft skills that are significant.

2. Performance using merged information

When we use the broader appraisal of success, success is positively correlated with all summary measures except for "specifics." The correlations with personal and motivational are statistically significant. And a number of individual CEO characteristics are still significantly correlated with

success: “efficiency,” “organization and planning,” “aggressiveness,” “attention to detail,” “persistence,” and “proactive.” These results are largely consistent with those that only use the PE firm appraisals. Again, tougher characteristics seem correlated with success. There are no soft skills correlated with success.

3. Performance using financial success

Financial success (as described by the buyout firms) is significantly correlated with the personal summary measure. It is significantly positively correlated with the individual measures of efficiency, organization and planning, follows through, persistence and managing growth. It is negatively correlated with treats people with respect and teamwork.

Once again, the tougher characteristics are correlated with success. For this measure, the softer characteristics are negatively correlated with success.

B. VC CEOs

1. Performance using VC firm ratings

For VC firm CEOs, we find that success is negatively correlated with the summary ratings, significantly with “interpersonal.” Success also is significantly negatively correlated with “develops people,” “treats with respect,” “efficiency,” “flexible,” “attention to detail,” and “teamwork.”

2. Performance using merged information

When we use the broader appraisal of success, the results are similar. Success is negatively correlated with all of the summary measures except for specifics. The correlation is significant for “personal.” Success also is negatively correlated with “organization,” “follows through,” “attention to detail,” “teamwork,” and “holds people accountable.”

These results for both measures of performance are somewhat surprising. They suggest that the individual CEO characteristics or talents are unimportant, if not harmful in success in VC funded

companies. One might interpret this result as indicating that the quality of the business idea is more determinative of outcomes than the initial quality of the management team in early stage companies. This is arguably consistent with the results in Kaplan, Sensoy and Stromberg (2006) that the business idea of start-ups rarely changes even though top managers change frequently.

One related interpretation is that more talented CEOs are hired – particularly from the outside – when the VC-funded company is not performing well. That may characterize a number of these investments, particularly those made in 2000 and 2001 when the tech boom was becoming the tech bust. Those companies and CEOs may have performed poorly because the businesses were of low quality.

3. Performance using VC financial success

Financial success (as described by the VC firms) is significantly correlated with the motivation summary measure. It is significantly positively correlated with the individual measures of “hires A players,” “removes underperformers,” and “top grade management,” while negatively correlated with “listening skills.”

At least for this measure, talent seems to matter some. And consistent with the buyout results, harder characteristics are positive while the soft “listening skills” are not.

C. Principal components

Finally, we compare the success measures to the three principal components of CEO characteristics.

1. Performance using PE firm ratings

The regressions in panel A of table 10 shows that success is positively correlated with the general talent component and negatively correlated with the second component when we control for whether or not the CEO is an incumbent. Both relations are significant. When we consider only buyout firms, the first and second components continue to be significant. The third component is also significantly

positively related to performance. When we consider only VC firms, only the second component remains significant (and negative).

Recall that the second component loads positively on team / consensus attributes and negatively on harder attributes like “moves fast,” “aggressive,” and “persistent.” These results suggest that the hard attributes are most correlated with success while the team / consensus attributes either play no role or are negatively associated with success.

These results suggest that the general talent in component 1 and, particularly, the hard attributes in component 2 are associated with CEO success.

Given that the first component is significantly related to hiring decisions while the second component is not, this result also suggests that team / consensus attributes are important determinants of hiring decisions even though they do not appear to be important determinants of subsequent success.

It is also interesting that the coefficients on incumbency in the regressions in panel A are insignificant. The analysis of hiring decisions found that a CEO candidate was significantly more likely to be hired if he or she was an incumbent, holding talent equal. This suggests that the private equity investors believed that firm specific skills or knowledge offset more general skills. One interpretation of the insignificant relation of incumbency to performance is that the firm specific skills did not have any impact on ultimate success controlling for CEO talent. In other words, PE investors overweight the value of firm specific skills and knowledge in hiring decisions.

2. Performance using merged information

The results are much noisier using the merged information and principal components. For the overall regression, none of the coefficients is significant. The only coefficient that is significant in the buyout or VC regressions is the coefficient on the first principal component in the buyout regression. Again, this suggests that general talent matters for buyout performance. Given the results for the individual correlations, it seems likely that it is the hard and neutral characteristics that drive the relation. Again, the “works for company” variable is not significant in any regression.

3. Performance using PE reported financial success

Panel C presents the regression results using PE reported financial success. For the sample overall, financial success is positively (but not significantly) related to the first, general talent, principal component, and negatively (and significantly) to the second principal component. The coefficient on the second principal component also is significantly negatively related to success for the VC CEOs only. Again, the “works for company” variable is not significant in any regression.

VI. Summary and Conclusion

Using a novel dataset of assessments of CEO candidates of companies involved in private equity transactions (PE), we study how CEO characteristics and abilities relate to hiring decisions, PE firms’ investment decisions, and the candidates’ subsequent performance. The candidates are assessed in seven general areas – “leadership,” “personal,” “intellectual,” “motivational,” “interpersonal,” “technical” and “specific” functional areas. These seven areas are aggregated from ratings of more than 40 individual characteristics. To our knowledge, this is the first systematic study with this level of detail on CEOs’ specific characteristics, skills and abilities.

We believe this is useful because a number of recent papers document a significant effect of individual CEOs on firms’ financial decisions and performance (see, e.g., Bertrand, Schoar (2003)). Yet, this literature does not define any aspects of this style, beyond observable characteristics such as “education,” “functional background,” and “age.” Moreover, we are able to consider the relation of CEO characteristics and abilities to hiring, investment, and performance.

First, when studying the characteristics and abilities, we find that CEO ratings are strongly positively correlated across characteristics and abilities. A principal component analysis of these characteristics generates a first principal component that can be characterized as a general talent component and a second principal component that is positive for team player / soft skills and negative for

execution / individual skills. We find that for both buyout and VC firms, outside CEO candidates are more highly rated than incumbents.

Next, we relate the abilities and characteristics to hiring and investment decisions. CEOs appear to be hired based on general ratings or talent. Many individual abilities are significant, particularly for outsider hires. Those abilities can be characterized as soft, hard, and neutral. There also is a very strong tendency to hire insider CEOs, holding ratings or talent constant. We find that private equity investors tend to invest in more highly rated CEOs. When hired, more highly rated CEOs are more successful, particularly for buyout-funded companies.

Finally, we relate the characteristics and abilities to subsequent performance or success. Success is significantly related to general talent, particularly for LBOs. Hard skills are consistently positively correlated with success, while soft skills are not positively correlated and, for VCs they are even negatively correlated with success. Success also is not related to incumbency.

We believe our results have several implications. First, it is possible to measure individual CEO talents and skills, and they matter. They are consistently correlated with hiring, investment, and performance.

Second, companies appear to trade off firm specific skills and knowledge against general skills when making hiring decisions. Insiders with similar skills as outsiders are significantly more likely to be hired.

Third, success and performance are more strongly correlated with hard / execution related skills than with soft / team related skills, conditional on hiring a CEO. In other words, CEOs with the characteristics of a Jack Welch appear more successful than CEOs with more team related skills. This suggests that soft skills may be overweighted in hiring decisions, even for private equity investors.

Finally, incumbent or insider CEOs are no more successful than outside candidates, holding talent constant. This is consistent with firm specific knowledge and skills being overweighted in hiring decisions. This result is more speculative as it is possible that it is driven by a requirement that investors insiders in order to be able to invest.

It also is worth comparing our results to those in Collins (2001)'s "Good to Great." Our results are consistent with Collins' findings that "Level 5" CEOs have unwavering resolve, are fanatically driven, exhibit workmanlike diligence, and build strong teams. At the same time, our results do not appear consistent with CEOs exhibiting compelling modesty and giving credit to others / taking blame on themselves.

Overall, we believe the analysis and results are novel and interesting. At the same time, we recognize the data and analysis have limitations. First, the results reflect buyout and VC-funded companies. While these are two quite different groups, these types of companies may have specific needs and, therefore, the results may not generalize to all companies. Second, the performance data are coarse and potentially noisy. Third, some of the interpretations have an element of subjectivity although this would seem to be unavoidable in this line of research.

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Table 1 (Individual Characteristics): This table contains descriptions of individual characteristics as provided by ghSMART.

	Description of characteristic
<i>Leadership:</i>	
Hires A Players	Sources, recruits, and hires A Players.
Develops People	Coaches people in their current roles to improve performance, and prepares them for future roles.
Removes Underperformers	Removes C Players within 180 days. Achieves this through coaching-out, redeployment, demotion, or termination.
Treats People with Respect	Values others, treating them fairly and showing concern for their views and feelings.
Efficiency	Able to produce significant output with minimal wasted effort.
Network of Talented People	Possesses a large network of talented people who could be brought in to help in current role.
Flexible / Adaptable	Adjusts quickly to changing priorities and conditions. Copes effectively with complexity and change.
<i>Personal:</i>	
Integrity	Does not cut corners ethically. Earns trust and maintains confidences. Does what is right, not politically expedient.
Organization and Planning	Plans, organizes, schedules, and budgets in an efficient, productive manner. Focuses on key priorities.
Calm Under Pressure	Maintains stable performance when under heavy pressure or stress.
Aggressive but respectful	Moves quickly and takes a forceful stand without being overly abrasive.
Moves Fast	Takes action quickly without getting bogged down by plans or potential obstacles.
Follows through on Commitments	Lives up to verbal and written agreements, regardless of personal cost.
<i>Intellectual:</i>	
Brainpower	Learns quickly. Demonstrates ability to quickly and proficiently understand and absorb new information.
Analytical Skills	Able to structure and process qualitative or quantitative data and draw insightful conclusions from it. Identifies significant problems and opportunities. Relates and compares data from different sources. Determines root causes and subtle relationships. Exhibits probing mind and achieves penetrating insights.
Strategic Thinking / Visioning	Able to see and communicate the big picture in an inspiring way. Determines opportunities and threats through comprehensive analysis of current and future trends.
Creative / Innovative	Generates new and innovative approaches to problems.
Attention to Detail	Does not let important details slip through the cracks or derail a project.
<i>Motivational:</i>	
Enthusiasm	Exhibits passion and excitement over work. Has a “can do” attitude.
Persistence	Demonstrates tenacity and willingness to go the distance to get something done.
Proactive / Initiative	Acts without being told what to do. Brings new ideas to company.
Work Ethic	Possesses a strong willingness to work hard and sometimes long hours to get the job done. Has a track record of working hard.

Sets High Standards	Expect personal performance and team performance to be nothing short of the best.
<i>Interpersonal:</i>	
Listening Skills	Lets others speak and seeks to understand their viewpoints.
Open to Criticism and Ideas	Often solicits feedback and reacts calmly to receiving criticism or negative feedback.
Written Communication.	Writes clearly and articulately using correct grammar. Maintains standard in all forms of written communication, including email.
Oral Communication.	Speaks clearly and articulately without being overly verbose or talkative.
Teamwork	Reaches out to peers and cooperates with supervisors and establishes an overall collaborative working relationship with peers.
Persuasion	Able to convince others to pursue a course of action
Holds People Accountable	Sets goals for team and follows-up to ensure progress toward completion. Takes action when someone is falling short of goal.
<i>Technical:</i>	
Sales	Has a proven track record of success working in this functional area.
Marketing	Has a proven track record of success working in this functional area.
Manufacturing	Has a proven track record of success working in this functional area.
Information Technology	Has a proven track record of success working in this functional area.
Finance	Has a proven track record of success working in this functional area.
Human Resources	Has a proven track record of success working in this functional area.
Knowledge of the Industry	Has extensive experience working in and around the industry.
<i>Specifics:</i>	
Achieve Revenue Targets	Has a track record of achieving revenue targets of similar size and complexity.
Achieve EBIT / EBITDA Targets	Has a track record of achieving EBITDA targets of similar size and complexity.
Top-grade Management Team	Consistently assesses team, removes underperformers within 180 days, and hires A Players to build the management team. Develops the team to achieve A Performance.
Work with Other Executives	Is politically savvy and able to work collaboratively and respectfully with others.
Introduce New Products	Has a track record of introducing new products on timelines similar to those required in job.
Manage Growth	Manages all aspects of strategic, operational, and employee change to minimize disruption caused by rapid growth.
Integrate Divest Target Cos.	Sets plans and executes on them to successfully integrate operations within six months, and culture within 12 months, for similarly sized acquisitions.
Achieve Non-Financial Targets	Has a track record of achieving similar non-financial targets of similar size and complexity.
Set Strategy	Formulates longer-term strategy (3-5 years) along with a shorter-term operating plan (monthly-quarterly); anticipates issues before they become problems; conducts contingency-planning and “what-if” scenarios and has achieved big wins by seeing things that others did not see; can translate strategy into objectives; employees know where the company is going and knows what the goals are for their department and for them individually.
Navigate Successful Exit	Understands the market and has relationships with potential buyers that enable CEO to assist the sellers in maximizing returns on exit.

Table 2 (Average Ratings): The table shows average ratings, standard deviations (in parenthesis), and number of observations for the aggregate and individual ratings. Further, the table contains a break-down of the sample into Buyout and VC candidates as well as Insiders and Outsiders, and presents the p-values for the hypothesis that the means of the ratings are equal. A higher number reflects a better rating. Panel A presents aggregate characteristics and Panel B presents ratings of individual characteristics.

Panel A: Aggregate Characteristics

	All Deals		Buyout vs VC			Insiders vs Outsiders		
	Mean	Obs	Buyout	VC	P-val	Insiders	Outsiders	P-val
Leadership	2.49 (0.74)	312	2.53 (0.72)	2.45 (0.75)	0.39	2.41 (0.74)	2.59 (0.72)	0.03
Personal	3.17 (0.63)	312	3.19 (0.62)	3.15 (0.64)	0.61	3.17 (0.61)	3.17 (0.65)	0.99
Intellectual	2.58 (0.79)	312	2.56 (0.77)	2.61 (0.80)	0.59	2.57 (0.76)	2.61 (0.83)	0.65
Motivational	3.25 (0.72)	311	3.33 (0.68)	3.18 (0.75)	0.07	3.25 (0.71)	3.26 (0.74)	0.88
Interpersonal	2.67 (0.75)	311	2.75 (0.68)	2.60 (0.81)	0.10	2.60 (0.72)	2.76 (0.79)	0.06
Technical	2.32 (0.53)	304	2.35 (0.50)	2.29 (0.57)	0.36	2.31 (0.54)	2.32 (0.53)	0.85
Specifics	2.49 (0.79)	306	2.53 (0.79)	2.46 (0.80)	0.41	2.40 (0.75)	2.60 (0.82)	0.03

Panel B: Individual Characteristics

	All Deals		Buyout vs VC			Insiders vs Outsiders		
	Mean	Obs	Buyout	VC	P-val	Insiders	Outsiders	P-val
<i>Leadership</i>								
Hires A Players	2.20 (1.14)	311	2.14 (1.11)	2.25 (1.17)	0.41	2.02 (1.11)	2.42 (1.15)	0.00
Develops People	2.26 (1.14)	312	2.26 (1.17)	2.26 (1.12)	1.00	2.13 (1.12)	2.40 (1.15)	0.04
Removes Underperformers	1.91 (1.13)	311	1.93 (1.13)	1.89 (1.14)	0.75	1.82 (1.10)	2.02 (1.16)	0.11
Treats People with Respect	2.93 (1.23)	307	3.08 (1.14)	2.78 (1.29)	0.03	2.95 (1.23)	2.90 (1.23)	0.73
Efficiency	2.87 (1.16)	308	2.81 (1.12)	2.93 (1.20)	0.35	2.75 (1.23)	3.02 (1.05)	0.04
Network of Talented People	2.61 (1.20)	309	2.67 (1.23)	2.57 (1.18)	0.47	2.55 (1.22)	2.69 (1.17)	0.30
Flexible / Adaptable	2.61 (1.21)	307	2.75 (1.20)	2.48 (1.20)	0.06	2.55 (1.20)	2.68 (1.22)	0.38

Panel B (cont.)

	All Deals		Buyout vs VC			Insiders vs Outsiders		
	Mean	Obs	Buyout	VC	P-val	Insiders	Outsiders	P-val
<i>Personal</i>								
Integrity	3.61 (0.84)	305	3.65 (0.79)	3.58 (0.88)	0.45	3.64 (0.83)	3.58 (0.85)	0.51
Organization and Planning	2.76 (1.18)	308	2.77 (1.17)	2.76 (1.19)	0.95	2.68 (1.23)	2.86 (1.12)	0.17
Calm Under Pressure	3.18 (1.06)	306	3.10 (1.03)	3.25 (1.08)	0.23	3.16 (1.10)	3.20 (1.01)	0.73
Aggressive but respectful	3.13 (1.04)	305	3.12 (1.04)	3.14 (1.04)	0.85	3.17 (1.06)	3.07 (1.02)	0.40
Moves Fast	3.01 (1.12)	306	3.01 (1.16)	3.01 (1.08)	0.99	3.01 (1.13)	3.02 (1.10)	0.90
Follows through on Commitments	3.34 (0.97)	309	3.48 (0.90)	3.22 (1.01)	0.02	3.37 (0.96)	3.31 (0.98)	0.58
<i>Intellectual</i>								
Brainpower	2.87 (1.10)	309	2.76 (1.13)	2.98 (1.06)	0.07	2.87 (1.09)	2.88 (1.11)	0.93
Analytical Skills	2.58 (1.24)	308	2.51 (1.25)	2.65 (1.23)	0.35	2.47 (1.23)	2.72 (1.24)	0.07
Strategic Thinking/Visioning	2.58 (1.22)	310	2.42 (1.19)	2.72 (1.24)	0.03	2.56 (1.24)	2.60 (1.21)	0.73
Creative/Innovative	2.68 (1.14)	310	2.66 (1.18)	2.71 (1.11)	0.73	2.76 (1.11)	2.59 (1.17)	0.20
Attention to Detail	2.18 (1.16)	309	2.42 (1.20)	1.96 (1.08)	0.00	2.14 (1.22)	2.23 (1.10)	0.53
<i>Motivational</i>								
Enthusiasm	3.03 (1.07)	309	3.10 (1.06)	2.96 (1.09)	0.24	3.07 (1.06)	2.97 (1.10)	0.42
Persistence	3.42 (0.91)	290	3.58 (0.79)	3.27 (0.99)	0.00	3.49 (0.84)	3.33 (0.99)	0.14
Proactivity/Initiative	3.35 (1.00)	304	3.44 (0.94)	3.28 (1.04)	0.16	3.39 (0.98)	3.30 (1.02)	0.45
Work Ethic	3.56 (0.80)	308	3.59 (0.80)	3.53 (0.80)	0.52	3.51 (0.84)	3.62 (0.74)	0.21
Sets High Standards	2.96 (1.11)	307	3.05 (1.09)	2.89 (1.12)	0.21	2.87 (1.14)	3.08 (1.06)	0.10
<i>Interpersonal</i>								
Listening Skills	2.55 (1.21)	309	2.71 (1.18)	2.41 (1.22)	0.03	2.44 (1.22)	2.69 (1.20)	0.07
Open to Criticism and Ideas	2.30 (1.19)	303	2.47 (1.18)	2.14 (1.19)	0.01	2.24 (1.18)	2.37 (1.20)	0.35
Written Communication	2.68 (1.21)	241	2.63 (1.16)	2.74 (1.27)	0.47	2.64 (1.26)	2.73 (1.16)	0.56
Oral Communication	2.96 (1.04)	307	2.97 (1.01)	2.96 (1.07)	0.94	2.85 (1.07)	3.10 (0.98)	0.03
Teamwork	2.72 (1.20)	307	2.80 (1.16)	2.64 (1.22)	0.25	2.70 (1.21)	2.73 (1.18)	0.84
Persuasion	2.96 (1.09)	309	3.00 (1.09)	2.93 (1.10)	0.59	2.99 (1.10)	2.93 (1.08)	0.60
Holds People Accountable	2.55 (1.19)	304	2.64 (1.19)	2.46 (1.19)	0.20	2.40 (1.18)	2.73 (1.19)	0.01

Table 3 (Principal Component Analysis): This table presents results of a principal component analysis. Panel A reports Eigenvalue and explained variance (both Proportion and Cumulative) for the first six components. Panel B reports loadings on individual characteristics for the first three components (loadings smaller than 0.17 in absolute value are left blank). The analysis is performed using the 277 candidates with complete ratings of all individual characteristics (excluding Persistence and Written Communication).

Panel A: Loadings on Individual Characteristics

Component	Eigenvalue	Proportion	Cumulative
1	7.70	0.28	0.28
2	3.32	0.12	0.39
3	2.10	0.07	0.47
4	1.60	0.06	0.53
5	1.24	0.04	0.57
6	1.12	0.04	0.61

Panel B: Component Loadings on Individual Characteristics

	Comp1	Comp2	Comp3
<i>Leadership</i>			
Hires A Players	0.2130		
Develops People	0.1957		
Removes Underperformers			0.2254
Treats People with Respect		0.3844	
Efficiency	0.2534		
Network of Talented People	0.2235		
Flexible/Adaptable	0.2012		
<i>Personal:</i>			
Integrity		0.2042	
Organization and Planning	0.1874		0.3491
Calm Under Pressure			
Aggressive but respectful	0.1827	-0.2660	-0.2122
Moves Fast	0.1859	-0.2938	-0.2190
Follows through on Commitments	0.2283		
<i>Intellectual:</i>			
Brainpower	0.1870		
Analytical Skills	0.1735		0.2894
Strategic Thinking/Visioning	0.2001		
Creative/Innovative	0.1858		-0.1730
Attention to Detail			0.3863
<i>Motivational:</i>			
Enthusiasm			-0.3618
Proactive / Initiative	0.2380	-0.1797	-0.1964
Work Ethic		-0.1808	
Sets High Standards	0.2384		
<i>Interpersonal:</i>			
Listening Skills		0.3533	
Open to Criticism and Ideas		0.3503	
Oral Communication	0.1934		
Teamwork	0.1939	0.3070	
Persuasion	0.2001		-0.3552
Holds People Accountable	0.1937		0.2760

Table 4 (Characteristics and Hiring Decisions): The table contains correlation coefficients for the characteristics and a dummy variable that equals 1 when the candidate is hired and is zero otherwise. Panel A shows these correlations for the aggregate competency measures. Panel B reports correlations for individual characteristics. Figures in parentheses are *p*-values for the hypotheses that the correlation coefficients equal zero. Figures in square brackets are numbers of observations.

Panel A: Aggregate Characteristics

	All Executives			Incumbent Executives			Outside Executives		
	All Obs.	Buyout Funds	VC Funds	All Obs.	Buyout Funds	VC Funds	All Obs.	Buyout Funds	VC Funds
Leadership	0.042 (0.46) [312]	0.027 (0.75) [148]	0.065 (0.41) [164]	-0.013 (0.87) [171]	-0.065 (0.56) [82]	0.051 (0.64) [89]	0.231 (0.01) [141]	0.305 (0.01) [66]	0.193 (0.10) [75]
Personal	0.154 (0.01) [312]	0.141 (0.09) [148]	0.172 (0.03) [164]	0.088 (0.25) [171]	0.110 (0.32) [82]	0.054 (0.61) [89]	0.247 (0.00) [141]	0.305 (0.01) [66]	0.227 (0.05) [75]
Intellectual	0.088 (0.12) [312]	0.015 (0.86) [148]	0.153 (0.05) [164]	0.045 (0.56) [171]	0.156 (0.16) [82]	-0.112 (0.29) [89]	0.171 (0.04) [141]	0.083 (0.51) [66]	0.260 (0.02) [75]
Motivational	0.123 (0.03) [311]	0.171 (0.04) [147]	0.100 (0.20) [164]	0.054 (0.48) [170]	0.159 (0.16) [81]	-0.042 (0.70) [89]	0.219 (0.01) [141]	0.278 (0.02) [66]	0.202 (0.08) [75]
Interpersonal	0.083 (0.14) [311]	0.077 (0.35) [147]	0.103 (0.19) [164]	-0.046 (0.55) [170]	0.011 (0.92) [81]	-0.101 (0.34) [89]	0.290 (0.00) [141]	0.373 (0.00) [66]	0.275 (0.02) [75]
Technical	0.064 (0.27) [304]	0.052 (0.54) [142]	0.083 (0.29) [162]	0.027 (0.73) [166]	-0.026 (0.82) [78]	0.084 (0.43) [88]	0.122 (0.15) [138]	0.190 (0.13) [64]	0.092 (0.44) [74]
Specifics	0.081 (0.16) [306]	0.070 (0.40) [145]	0.100 (0.21) [161]	0.080 (0.31) [167]	0.111 (0.33) [79]	0.053 (0.63) [88]	0.241 (0.00) [139]	0.228 (0.07) [66]	0.269 (0.02) [73]

Table 4 (cont.)

Panel B: Individual Characteristics

	All Executives			Incumbent Executives			Outside Executives		
	All Obs.	Buyout Funds	VC Funds	All Obs.	Buyout Funds	VC Funds	All Obs.	Buyout Funds	VC Funds
<i>Leadership:</i>									
Hires A Players	0.016 (0.78)	-0.070 (0.40)	0.087 (0.27)	0.026 (0.74)	-0.162 (0.15)	0.205 (0.05)	0.202 (0.02)	0.230 (0.06)	0.184 (0.11)
Develops People	0.035 (0.54)	0.001 (0.99)	0.070 (0.38)	-0.032 (0.67)	-0.160 (0.15)	0.127 (0.24)	0.214 (0.01)	0.262 (0.03)	0.176 (0.13)
Removes Underperformers	0.064 (0.26)	0.036 (0.66)	0.093 (0.24)	0.109 (0.16)	0.063 (0.58)	0.163 (0.13)	0.156 (0.07)	0.194 (0.12)	0.139 (0.23)
Treats People with Respect	0.021 (0.72)	0.049 (0.55)	0.014 (0.86)	-0.129 (0.09)	-0.130 (0.25)	-0.117 (0.28)	0.098 (0.25)	0.216 (0.08)	0.042 (0.72)
Efficiency	0.043 (0.46)	0.013 (0.88)	0.062 (0.43)	0.044 (0.57)	0.064 (0.57)	0.012 (0.91)	0.202 (0.02)	0.157 (0.21)	0.229 (0.05)
Network of Talented People	-0.021 (0.71)	-0.020 (0.81)	-0.016 (0.84)	-0.038 (0.62)	-0.071 (0.53)	0.006 (0.95)	0.045 (0.60)	0.118 (0.35)	-0.003 (0.98)
Flexible / Adaptable	0.012 (0.83)	0.075 (0.37)	-0.031 (0.69)	-0.038 (0.62)	0.067 (0.55)	-0.153 (0.16)	0.100 (0.24)	0.176 (0.16)	0.065 (0.58)
<i>Personal:</i>									
Integrity	0.082 (0.15)	0.028 (0.74)	0.140 (0.08)	-0.088 (0.26)	-0.146 (0.20)	-0.020 (0.85)	0.173 (0.04)	0.301 (0.01)	0.137 (0.25)
Organization and Planning	0.050 (0.39)	-0.025 (0.77)	0.121 (0.13)	0.127 (0.10)	0.109 (0.33)	0.142 (0.19)	0.110 (0.20)	0.077 (0.54)	0.157 (0.18)
Calm Under Pressure	-0.004 (0.95)	-0.018 (0.83)	-0.001 (0.99)	-0.055 (0.48)	-0.040 (0.73)	-0.093 (0.39)	0.049 (0.56)	0.124 (0.32)	-0.002 (0.98)
Aggressive but respectful	0.134 (0.02)	0.134 (0.11)	0.133 (0.09)	0.044 (0.58)	0.085 (0.46)	-0.012 (0.92)	0.195 (0.02)	0.189 (0.13)	0.202 (0.09)
Moves Fast	0.112 (0.05)	0.136 (0.10)	0.088 (0.27)	0.065 (0.40)	0.076 (0.50)	0.052 (0.63)	0.196 (0.02)	0.258 (0.04)	0.144 (0.22)
Follows through on Commitments	0.162 (0.00)	0.255 (0.00)	0.108 (0.17)	0.152 (0.05)	0.254 (0.02)	0.095 (0.37)	0.199 (0.02)	0.238 (0.05)	0.185 (0.12)
<i>Intellectual:</i>									
Brainpower	0.058 (0.31)	-0.072 (0.39)	0.178 (0.02)	0.057 (0.47)	0.022 (0.84)	0.071 (0.52)	0.087 (0.31)	-0.053 (0.67)	0.204 (0.08)
Analytical Skills	-0.024 (0.67)	-0.172 (0.04)	0.109 (0.16)	0.082 (0.29)	0.160 (0.15)	-0.054 (0.62)	0.013 (0.88)	-0.162 (0.20)	0.172 (0.14)
Strategic Thinking/Visioning	0.063 (0.27)	0.023 (0.79)	0.085 (0.28)	0.060 (0.43)	0.200 (0.07)	-0.126 (0.24)	0.115 (0.18)	0.014 (0.91)	0.191 (0.10)
Creative / Innovative	0.121 (0.03)	0.112 (0.18)	0.127 (0.11)	-0.057 (0.46)	0.033 (0.77)	-0.186 (0.08)	0.193 (0.02)	0.173 (0.17)	0.220 (0.06)
Attention to Detail	0.074 (0.20)	0.144 (0.08)	0.033 (0.68)	-0.009 (0.91)	0.067 (0.55)	-0.074 (0.50)	0.202 (0.02)	0.281 (0.02)	0.176 (0.13)

Table 4 (cont.)

	All Obs.	Buyout Funds	VC Funds	All Obs.	Buyout Funds	VC Funds	All Obs.	Buyout Funds	VC Funds
<i>Motivational:</i>									
Enthusiasm	0.143 (0.01)	0.232 (0.00)	0.070 (0.38)	0.086 (0.27)	0.195 (0.08)	-0.009 (0.93)	0.183 (0.03)	0.232 (0.06)	0.142 (0.23)
Persistence	0.150 (0.01)	0.254 (0.00)	0.104 (0.21)	0.060 (0.46)	0.194 (0.09)	-0.005 (0.96)	0.160 (0.07)	0.220 (0.08)	0.143 (0.24)
Proactive / Initiative	0.102 (0.08)	0.119 (0.16)	0.101 (0.21)	0.057 (0.47)	0.131 (0.25)	-0.025 (0.82)	0.122 (0.16)	0.220 (0.08)	0.090 (0.44)
Work Ethic	0.031 (0.59)	0.035 (0.68)	0.034 (0.67)	0.017 (0.83)	0.084 (0.46)	-0.074 (0.49)	0.136 (0.11)	0.130 (0.30)	0.153 (0.19)
Sets High Standards	0.045 (0.43)	0.044 (0.60)	0.058 (0.46)	0.012 (0.88)	0.055 (0.63)	-0.032 (0.77)	0.192 (0.02)	0.224 (0.07)	0.196 (0.10)
<i>Interpersonal:</i>									
Listening Skills	0.023 (0.69)	0.028 (0.74)	0.039 (0.63)	-0.004 (0.96)	0.032 (0.77)	-0.031 (0.77)	0.164 (0.05)	0.216 (0.08)	0.162 (0.17)
Open to Criticism and Ideas	0.089 (0.12)	0.124 (0.14)	0.080 (0.32)	-0.069 (0.38)	-0.021 (0.86)	-0.114 (0.29)	0.278 (0.00)	0.427 (0.00)	0.209 (0.08)
Written Communication	0.104 (0.11)	0.003 (0.97)	0.206 (0.03)	0.018 (0.84)	0.066 (0.60)	-0.107 (0.41)	0.247 (0.01)	0.079 (0.55)	0.400 (0.00)
Oral Communication	0.047 (0.42)	0.020 (0.81)	0.072 (0.36)	0.007 (0.93)	0.038 (0.74)	-0.029 (0.79)	0.232 (0.01)	0.189 (0.13)	0.277 (0.02)
Teamwork	0.087 (0.13)	0.097 (0.25)	0.090 (0.25)	-0.124 (0.11)	-0.071 (0.53)	-0.189 (0.08)	0.268 (0.00)	0.361 (0.00)	0.230 (0.05)
Persuasion	0.098 (0.08)	0.108 (0.19)	0.095 (0.23)	0.020 (0.79)	0.117 (0.30)	-0.099 (0.36)	0.155 (0.07)	0.163 (0.19)	0.167 (0.16)
Holds People Accountable	-0.006 (0.91)	-0.033 (0.70)	0.030 (0.70)	-0.013 (0.86)	-0.104 (0.36)	0.108 (0.32)	0.146 (0.09)	0.188 (0.13)	0.129 (0.28)

Table 5 (Components and Hiring Decisions): This table analyzes the relationship between each candidate’s characteristics, as captured by the loadings on the three components, and the hiring decision. The table reports coefficients from a linear regression model where the endogenous variable is a binary variable that equals one when the candidate is hired and is zero otherwise. Standard errors are reported in parentheses. Statistical significance at the 1, 5, and 10% levels are indicated by ***, **, and *, respectively.

	All Deals				Buyout Only		VC Only	
Comp 1	0.018*	0.021**	0.023***	0.023***	0.037***	0.037***	0.023**	0.024**
	(0.010)	(0.009)	(0.008)	(0.008)	(0.013)	(0.013)	(0.011)	(0.011)
Comp 2	0.004	0.000	0.002	0.002	0.019	0.019	-0.012	-0.012
	(0.015)	(0.014)	(0.013)	(0.013)	(0.019)	(0.019)	(0.017)	(0.017)
Comp 3	-0.030	-0.023	-0.004	-0.004	-0.004	-0.004	0.007	0.008
	(0.019)	(0.018)	(0.016)	(0.016)	(0.022)	(0.022)	(0.024)	(0.023)
Works For Comp			0.512***	0.488***	0.599***	0.596***	0.452***	0.406***
			(0.047)	(0.051)	(0.068)	(0.073)	(0.065)	(0.072)
Post Investment Assessment		-0.260		-0.064		-0.009		-0.105
		(0.055)		(0.053)		(0.074)		(0.075)
Constant	0.715***	0.803***	0.430***	0.465***	0.327***	0.332***	0.505***	0.568***
	(0.027)	(0.032)	(0.034)	(0.045)	(0.050)	(0.063)	(0.047)	(0.065)
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Investors	All	All	All	All	buyout	buyout	VC	VC
Observations	277	277	277	277	131	131	146	146
R ²	0.02	0.10	0.34	0.35	0.44	0.44	0.31	0.32

Table 6 (Characteristics and Investment Decisions): The table contains correlation coefficients for the aggregate characteristics and a dummy variable that equals one when the PE firm invests in the company and is zero otherwise. The correlations are calculated for the full sample and for the subsample of candidates that are hired, and separated into incumbent and outside candidates. Panel A shows these correlations for the aggregate competency measures. Panel B reports correlations when the candidate is an incumbent CEO. Panel C reports correlations for candidates that are outside CEOs. Figures in parentheses are p-values for tests of the hypotheses that each correlation coefficient equals zero. Figures in square brackets are the number of observations in each cell.

Panel A: Incumbents and Outside Executives

	All Executives			Hired Executives		
	All	Buyout	VC	All	Buyout	VC
Leadership	0.129 (0.063) [210]	0.144 (0.144) [105]	0.108 (0.271) [105]	0.134 (0.082) [170]	0.232 (0.041) [78]	0.066 (0.535) [92]
Personal	0.132 (0.056) [210]	0.140 (0.155) [105]	0.110 (0.264) [105]	0.121 (0.116) [170]	0.200 (0.080) [78]	0.043 (0.682) [92]
Intellectual	0.020 (0.778) [210]	0.029 (0.772) [105]	0.022 (0.826) [105]	0.010 (0.898) [170]	0.028 (0.809) [78]	0.014 (0.898) [92]
Motivational	0.140 (0.044) [209]	0.126 (0.202) [104]	0.135 (0.171) [105]	0.163 (0.034) [169]	0.183 (0.110) [77]	0.121 (0.253) [92]
Interpersonal	0.096 (0.168) [209]	0.104 (0.292) [104]	0.073 (0.462) [105]	0.115 (0.135) [169]	0.201 (0.079) [77]	0.036 (0.735) [92]
Technical	0.092 (0.191) [205]	0.090 (0.374) [101]	0.084 (0.396) [104]	0.105 (0.179) [165]	0.102 (0.390) [74]	0.103 (0.330) [91]
Specifics	0.101 (0.148) [207]	0.094 (0.343) [103]	0.093 (0.349) [104]	0.115 (0.140) [167]	0.156 (0.178) [76]	0.068 (0.522) [91]

Table 6 (cont.)**Panel B: Incumbent Executives Only**

	All Executives			Hired Executives		
	All	Buyout	VC	All	Buyout	VC
Leadership	0.117 (0.160) [146]	0.239 (0.048) [69]	0.023 (0.843) [77]	0.097 (0.257) [137]	0.205 (0.106) [63]	0.025 (0.832) [74]
Personal	0.063 (0.447) [146]	0.089 (0.468) [69]	0.033 (0.776) [77]	0.073 (0.398) [137]	0.107 (0.406) [63]	0.033 (0.779) [74]
Intellectual	0.031 (0.711) [146]	0.070 (0.567) [69]	0.031 (0.786) [77]	0.008 (0.927) [137]	0.037 (0.773) [63]	0.011 (0.924) [74]
Motivational	0.120 (0.152) [145]	0.140 (0.257) [68]	0.086 (0.457) [77]	0.107 (0.214) [136]	0.105 (0.415) [62]	0.081 (0.494) [74]
Interpersonal	0.056 (0.506) [145]	0.152 (0.216) [68]	-0.024 (0.836) [77]	0.041 (0.636) [136]	0.146 (0.259) [62]	-0.047 (0.690) [74]
Technical	0.070 (0.407) [141]	0.104 (0.409) [65]	0.046 (0.694) [76]	0.064 (0.465) [132]	0.072 (0.588) [59]	0.062 (0.604) [73]
Specifics	0.110 (0.191) [143]	0.159 (0.200) [67]	0.056 (0.629) [76]	0.103 (0.237) [134]	0.127 (0.328) [61]	0.067 (0.571) [73]

Table 6 (cont.)**Panel C: Outside Executives Only**

	All Executives			Hired Executives		
	All	Buyout	VC	All	Buyout	VC
Leadership	0.187 (0.139) [64]	0.044 (0.798) [36]	0.335 (0.081) [28]	0.248 (0.164) [33]	0.268 (0.334) [15]	0.212 (0.400) [18]
Personal	0.250 (0.047) [64]	0.267 (0.115) [36]	0.227 (0.247) [28]	0.295 (0.096) [33]	0.626 (0.013) [15]	0.087 (0.731) [18]
Intellectual	0.033 (0.795) [64]	0.058 (0.739) [36]	-0.009 (0.962) [28]	-0.035 (0.845) [33]	-0.179 (0.524) [15]	0.010 (0.969) [18]
Motivational	0.195 (0.122) [64]	0.124 (0.471) [36]	0.263 (0.176) [28]	0.419 (0.015) [33]	0.603 (0.017) [15]	0.292 (0.239) [18]
Interpersonal	0.203 (0.107) [64]	0.095 (0.581) [36]	0.295 (0.127) [28]	0.389 (0.026) [33]	0.376 (0.168) [15]	0.344 (0.162) [18]
Technical	0.138 (0.277) [64]	0.102 (0.555) [36]	0.166 (0.399) [28]	0.307 (0.082) [33]	0.188 (0.501) [15]	0.349 (0.156) [18]
Specifics	0.138 (0.277) [64]	0.066 (0.703) [36]	0.209 (0.285) [28]	0.088 (0.625) [33]	0.185 (0.510) [15]	0.016 (0.948) [18]

Table 7 (Components and Investment Decisions): This table analyzes the relationship between each candidate's characteristics, as captured by the loadings on the three components, and the PE firms' investment decisions. The sample is restricted to candidates where the assessment were made before the PE firm invested. The table reports coefficients from a linear regression model where the endogenous variable is a binary variable that equals one when the candidate is hired. Standard errors are reported in parentheses. Statistical significance at the 1, 5, and 10% levels are indicated by ***, **, and *, respectively.

	All Deals		Buyout Only	VC Only
Comp 1	0.019 (0.013)	0.022* (0.013)	0.035* (0.021)	0.035* (0.018)
Comp 2	0.008 (0.020)	0.006 (0.021)	0.017 (0.031)	-0.028 (0.031)
Comp 3	-0.014 (0.025)	-0.011 (0.026)	0.012 (0.036)	-0.034 (0.040)
Works For Comp		0.122 (0.081)	0.217* (0.119)	0.113 (0.120)
Constant	0.617*** (0.036)	0.532*** (0.067)	0.514*** (0.094)	0.488*** (0.101)
Year Fixed Effects	No	Yes	Yes	Yes
Investors	All	All	Buyout	VC
Observations	183	183	90	93
R ²	0.01	0.06	0.10	0.16

Table 8 (Summary of Outcome Measures): This table contains summary statistics for the outcome measures (see main text for descriptions). The sample is separated into the entire sample, buyout deals, and VC deals. Further, the candidates are separated into those rated by the PE investors and those rated through our own research. The column Total Execs contains the number of candidates. The column Rated Execs contains number of rated candidates. The mean rating is the average success rating. In Panel A, the mean is calculated counting “Successful” investments as one, “Unclear” investments as 0.5, and “Not Successful” investments as zero. In Panel B, the calculated is based on the PE firms’ assessments of the financial success, counting “Very Successful” as 3, “Successful” as 2, “Unclear” as 1, and “Not Successful” as 0.

Panel A: "Was the Executive Successful?"

	Total Execs	Rated Execs	Mean Rating	Not Successful (0)	Unclear (0.5)	Successful (1)
<i>Entire Sample</i>						
PE Firm	313	82	0.54	37%	18%	45%
Own Research	313	225	0.64	16%	39%	44%
Combined	313	225	0.62	18%	40%	42%
<i>Buyout Deals</i>						
PE Firm	148	33	0.70	24%	12%	64%
Own Reserach	148	101	0.66	11%	46%	44%
Combined	148	101	0.65	12%	46%	43%
<i>VC Deals</i>						
PE Firm	165	49	0.44	45%	22%	33%
Own Research	165	124	0.62	21%	34%	45%
Combined	165	124	0.59	23%	35%	41%

Panel B: "Was the Deal Financially Successful?"

	Total Execs	Rated Execs	Mean Rating	Not Successful (0)	Unclear (1)	Successful (2)	Very Successful (3)
Entire Sample	313	68	0.93	53%	12%	25%	10%
Buyout Deals	148	27	1.56	30%	7%	41%	22%
VC Deals	165	41	0.51	68%	15%	15%	2%

Table 9 (Characteristics and Outcome Measures): This table presents correlation coefficients for the success measures and characteristics. The correlations are calculated for the entire sample and separately for buyout and VC deals. Panel A shows correlations for aggregate ratings measures, and Panel B contains correlations for individual ratings. The figures in parentheses are *p*-values for a test of the hypotheses that the correlation equals zero. Figures in square brackets are the number of observations in each cell.

Panel A: Aggregate Characteristics

	PE Firm Answers			Merged Answers			PE Firm Answers: Financial Success		
	All Observations	Buyout Funds	VC Funds	All Observations	Buyout Funds	VC Funds	All Observations	Buyout Funds	VC Funds
Leadership	0.001 (0.994) [82]	0.274 (0.123) [33]	-0.200 (0.169) [49]	0.005 (0.939) [224]	0.140 (0.163) [101]	-0.091 (0.318) [123]	0.115 (0.350) [68]	0.016 (0.935) [27]	0.180 (0.260) [41]
Personal	0.063 (0.571) [82]	0.487 (0.004) [33]	-0.202 (0.164) [49]	-0.030 (0.659) [224]	0.230 (0.021) [101]	-0.209 (0.020) [123]	0.197 (0.107) [68]	0.328 (0.094) [27]	0.095 (0.555) [41]
Intellectual	0.054 (0.629) [82]	0.411 (0.018) [33]	-0.179 (0.219) [49]	0.021 (0.759) [224]	0.115 (0.254) [101]	-0.034 (0.707) [123]	0.060 (0.630) [68]	0.012 (0.954) [27]	0.151 (0.346) [41]
Motivational	0.136 (0.222) [82]	0.355 (0.043) [33]	-0.064 (0.663) [49]	0.071 (0.289) [223]	0.217 (0.030) [100]	-0.034 (0.707) [123]	0.273 (0.025) [68]	0.084 (0.676) [27]	0.278 (0.078) [41]
Interpersonal	-0.122 (0.274) [82]	0.169 (0.348) [33]	-0.322 (0.024) [49]	-0.035 (0.599) [223]	0.126 (0.213) [100]	-0.147 (0.105) [123]	-0.122 (0.321) [68]	-0.143 (0.478) [27]	-0.150 (0.348) [41]
Technical	-0.061 (0.592) [80]	0.069 (0.708) [32]	-0.130 (0.378) [48]	-0.003 (0.964) [218]	0.091 (0.376) [96]	-0.065 (0.477) [122]	-0.038 (0.761) [66]	-0.089 (0.666) [26]	0.038 (0.816) [40]
Specifics	0.107 (0.343) [81]	0.237 (0.184) [33]	-0.050 (0.737) [48]	0.048 (0.477) [219]	0.094 (0.359) [98]	0.013 (0.890) [121]	0.164 (0.186) [67]	0.114 (0.571) [27]	0.214 (0.184) [40]

Panel B: Individual Characteristics

	PE Firm Answers			All Answers			PE Firm Answers: Financial Success		
	All Obs	Buyout	VC	All Obs	Buyout	VC	All Obs	Buyout	VC
		Funds	Funds		Funds	Funds		Funds	
<i>Leadership:</i>									
Hires A Players	0.169 (0.130)	0.264 (0.138)	0.077 (0.597)	0.076 (0.258)	0.156 (0.120)	0.037 (0.689)	0.193 (0.114)	0.136 (0.499)	0.270 (0.088)
Develops People	-0.094 (0.401)	0.089 (0.621)	-0.250 (0.083)	-0.021 (0.758)	0.050 (0.619)	-0.071 (0.433)	0.104 (0.400)	-0.041 (0.839)	0.157 (0.327)
Removes Underperformers	0.189 (0.089)	0.190 (0.289)	0.143 (0.327)	0.060 (0.372)	0.056 (0.582)	0.063 (0.489)	0.322 (0.007)	0.158 (0.431)	0.454 (0.003)
Treats People with Respect	-0.150 (0.181)	-0.025 (0.889)	-0.278 (0.056)	-0.060 (0.376)	-0.009 (0.927)	-0.116 (0.209)	-0.234 (0.057)	-0.347 (0.077)	-0.223 (0.166)
Efficiency	-0.003 (0.979)	0.445 (0.009)	-0.267 (0.064)	0.030 (0.655)	0.293 (0.003)	-0.148 (0.106)	0.176 (0.151)	0.470 (0.013)	0.048 (0.764)
Network of Talented People	0.043 (0.699)	0.241 (0.178)	-0.113 (0.441)	-0.016 (0.817)	0.152 (0.130)	-0.144 (0.113)	0.017 (0.888)	-0.011 (0.958)	0.120 (0.457)
Flexible / Adaptable	-0.179 (0.110)	-0.093 (0.606)	-0.332 (0.021)	-0.050 (0.463)	-0.063 (0.535)	-0.064 (0.488)	-0.070 (0.572)	-0.301 (0.127)	0.011 (0.947)
<i>Personal:</i>									
Integrity	0.004 (0.975)	0.023 (0.901)	-0.058 (0.692)	-0.025 (0.709)	0.148 (0.146)	-0.146 (0.111)	-0.116 (0.346)	-0.072 (0.723)	-0.227 (0.153)
Organization and Planning	0.023 (0.840)	0.391 (0.027)	-0.207 (0.153)	-0.013 (0.854)	0.217 (0.031)	-0.181 (0.047)	0.156 (0.207)	0.408 (0.039)	0.097 (0.545)
Calm Under Pressure	-0.050 (0.659)	0.239 (0.180)	-0.232 (0.113)	-0.056 (0.411)	0.018 (0.863)	-0.097 (0.292)	0.040 (0.750)	0.201 (0.315)	-0.037 (0.823)
Aggressive but respectful	0.101 (0.371)	0.280 (0.114)	-0.041 (0.780)	0.024 (0.724)	0.236 (0.019)	-0.130 (0.161)	0.179 (0.146)	0.124 (0.538)	0.162 (0.318)
Moves Fast	0.103 (0.360)	0.240 (0.186)	-0.011 (0.941)	0.018 (0.790)	0.138 (0.175)	-0.071 (0.439)	0.160 (0.197)	0.117 (0.569)	0.194 (0.225)
Follows through on Commitments	0.015 (0.895)	0.382 (0.028)	-0.231 (0.115)	-0.071 (0.295)	0.093 (0.357)	-0.191 (0.036)	0.202 (0.102)	0.386 (0.047)	-0.020 (0.903)
<i>Intellectual:</i>									
Brainpower	0.075 (0.506)	0.291 (0.101)	-0.033 (0.823)	-0.014 (0.840)	0.094 (0.353)	-0.073 (0.426)	-0.029 (0.818)	-0.089 (0.659)	0.170 (0.295)
Analytical Skills	0.040 (0.719)	0.408 (0.018)	-0.173 (0.234)	-0.015 (0.827)	0.081 (0.430)	-0.060 (0.510)	0.099 (0.421)	0.182 (0.363)	0.186 (0.243)
Strategic Thinking	0.000 (1.000)	0.106 (0.556)	-0.088 (0.553)	0.067 (0.323)	0.043 (0.673)	0.105 (0.248)	0.048 (0.701)	-0.084 (0.678)	0.250 (0.120)
Creative / Innovative	0.043 (0.701)	0.023 (0.898)	-0.012 (0.936)	0.049 (0.464)	0.010 (0.923)	0.083 (0.364)	0.015 (0.902)	-0.194 (0.333)	0.165 (0.311)
Attention to Detail	0.037 (0.743)	0.448 (0.009)	-0.301 (0.036)	-0.017 (0.804)	0.164 (0.104)	-0.200 (0.028)	0.065 (0.598)	0.215 (0.281)	-0.186 (0.243)

Panel B (cont.)

	PE Firm Answers			All Answers			PE Firm Answers: Financial Success		
	All Obs	Buyout	VC	All Obs	Buyout	VC	All Obs	Buyout	VC
		Funds	Funds		Funds	Funds		Funds	
<i>Motivational:</i>									
Enthusiasm	-0.066 (0.560)	-0.091 (0.613)	-0.132 (0.373)	0.034 (0.610)	0.030 (0.770)	0.020 (0.830)	0.045 (0.716)	-0.145 (0.471)	0.109 (0.502)
Persistence	0.115 (0.320)	0.489 (0.004)	-0.144 (0.351)	0.019 (0.787)	0.273 (0.007)	-0.143 (0.129)	0.292 (0.019)	0.339 (0.090)	0.156 (0.351)
Proactive / Initiative	0.205 (0.068)	0.321 (0.069)	0.061 (0.684)	0.088 (0.198)	0.249 (0.014)	-0.018 (0.843)	0.252 (0.041)	0.191 (0.340)	0.201 (0.220)
Work Ethic	0.127 (0.258)	0.200 (0.265)	0.020 (0.890)	0.046 (0.495)	0.119 (0.243)	-0.015 (0.870)	0.082 (0.504)	-0.119 (0.555)	0.164 (0.305)
Sets High Standards	0.142 (0.206)	0.400 (0.021)	-0.085 (0.565)	0.046 (0.501)	0.117 (0.248)	-0.014 (0.882)	0.259 (0.035)	0.088 (0.663)	0.251 (0.118)
<i>Interpersonal:</i>									
Listening Skills	-0.099 (0.381)	0.024 (0.897)	-0.231 (0.115)	-0.010 (0.884)	0.039 (0.701)	-0.062 (0.501)	-0.186 (0.132)	-0.133 (0.509)	-0.391 (0.013)
Open to Criticism and Ideas	-0.011 (0.924)	0.174 (0.334)	-0.208 (0.156)	0.036 (0.594)	0.121 (0.235)	-0.051 (0.581)	-0.148 (0.234)	-0.231 (0.247)	-0.250 (0.120)
Written Communication	0.040 (0.753)	0.290 (0.128)	0.041 (0.817)	0.026 (0.741)	0.168 (0.135)	-0.054 (0.623)	-0.076 (0.585)	-0.085 (0.707)	0.110 (0.548)
Oral Communication	-0.146 (0.194)	-0.162 (0.369)	-0.109 (0.460)	-0.057 (0.396)	-0.051 (0.619)	-0.061 (0.504)	-0.202 (0.101)	-0.255 (0.200)	0.024 (0.883)
Teamwork	-0.261 (0.018)	-0.118 (0.514)	-0.464 (0.001)	-0.116 (0.087)	0.009 (0.933)	-0.212 (0.019)	-0.163 (0.185)	-0.334 (0.089)	-0.246 (0.121)
Persuasion	-0.050 (0.655)	0.067 (0.710)	-0.168 (0.255)	0.025 (0.709)	0.124 (0.220)	-0.047 (0.611)	0.018 (0.887)	0.079 (0.697)	0.051 (0.756)
Holds People Accountable	0.016 (0.885)	0.373 (0.033)	-0.232 (0.117)	-0.044 (0.521)	0.119 (0.242)	-0.167 (0.068)	0.169 (0.174)	0.266 (0.180)	0.045 (0.784)

Table 10 (Outcome Regressions): This table presents the relationship between the candidates' characteristics and the investment outcome. The characteristics are the loadings on the three components, whether the candidates are insiders (works for company), and whether the assessment is made after to the PE firm's investment (Post Investment Assessment). The investment outcomes are measured in three ways. In Panel A, B, and C, the outcomes are (1) the success measure reported by the PE firms, (2) success reported by the PE firms merged with measures from own research, and (3) PE firms' reported financial success measures, respectively. The two first measures are coded as "successful" =1, "uncertain" = 0.5, and "not successful" = 0, and the financial measure is coded on a scale from 1 to 4 (see text for details). Standard errors are reported in parentheses. Statistical significance at the 1, 5, and 10% levels are indicated by ***, **, and * respectively.

Panel A: PE firms' Success Measure

	All Deals				Buyout Only		VC Only	
Comp 1	0.000 (0.018)	0.004 (0.018)	0.034* (0.018)	0.034* (0.018)	0.078* (0.044)	0.078* (0.043)	0.024 (0.025)	0.026 (0.026)
Comp 2	-0.055* (0.030)	-0.055* (0.030)	-0.107*** (0.029)	-0.107*** (0.029)	-0.109* (0.057)	-0.092 (0.057)	-0.074* (0.037)	-0.075* (0.037)
Comp 3	0.019 (0.034)	0.019 (0.034)	0.024 (0.031)	0.024 (0.031)	0.078* (0.042)	0.086* (0.041)	-0.031 (0.051)	-0.027 (0.052)
Works For Comp			0.024 (0.113)	0.017 (0.117)	0.007 (0.189)	-0.067 (0.193)	0.163 (0.168)	0.176 (0.172)
Post Investment Assessment		-0.170 (0.122)		-0.032 (0.114)		-0.233 (0.175)		0.088 (0.163)
Constant	0.549*** (0.054)	0.590*** (0.061)	0.515*** (0.095)	0.528*** (0.106)	0.636*** (0.170)	0.742*** (0.185)	0.322** (0.133)	0.288** (0.149)
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Investors	All	All	All	All	Buyout	Buyout	VC	VC
Observations	75	75	75	75	31	31	44	44
R ²	0.05	0.08	0.36	0.36	0.50	0.50	0.38	0.38

Table 10 (cont.)

Panel B: Combined Success Measures

	All Deals				Buyout Only		VC Only	
Comp 1	-0.003 (0.010)	0.000 (0.010)	0.002 (0.010)	0.003 (0.010)	0.034** (0.016)	0.032** (0.016)	-0.008 (0.014)	-0.007 (0.014)
Comp 2	-0.007 (0.015)	-0.013 (0.015)	-0.015 (0.015)	-0.023 (0.015)	-0.003 (0.021)	-0.017 (0.022)	-0.016 (0.022)	-0.020 (0.022)
Comp 3	-0.007 (0.019)	-0.006 (0.019)	-0.011 (0.019)	-0.013 (0.019)	0.030 (0.025)	0.025 (0.024)	-0.044 (0.031)	-0.046 (0.030)
Works For Comp			0.047 (0.065)	-0.025 (0.067)	0.042 (0.102)	-0.031 (0.103)	0.133 (0.089)	0.063 (0.095)
Post Investment Assessment		-0.194*** (0.061)		-0.208*** (0.066)		-0.220** (0.092)		-0.175* (0.094)
Constant	0.619*** (0.027)	0.668*** (0.031)	0.584*** (0.054)	0.689*** (0.063)	0.607*** (0.089)	0.720*** (0.098)	0.505*** (0.072)	0.600*** (0.088)
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Investors	All	All	All	All	Buyout	Buyout	VC	VC
Observations	198	198	198	198	88	88	110	110
R ²	0.00	0.05	0.05	0.36	0.11	0.17	0.12	0.15

Table 10 (cont.)

Panel C: Financial Success Measure

	All Deals				Buyout Only		VC Only	
Comp 1	0.031 (0.046)	0.037 (0.046)	0.074 (0.054)	0.072 (0.055)	0.154 (0.104)	0.124 (0.110)	0.089 (0.058)	0.099 (0.058)
Comp 2	-0.197** (0.078)	-0.197** (0.077)	-0.183** (0.089)	-0.182** (0.090)	-0.033 (0.169)	-0.035 (0.170)	-0.168* (0.087)	-0.172* (0.086)
Comp 3	0.086 (0.095)	0.078 (0.095)	0.103 (0.103)	0.096 (0.104)	0.185 (0.163)	0.178 (0.165)	0.037 (0.119)	0.052 (0.119)
Works For Comp			0.412 (0.338)	0.369 (0.347)	0.881 (0.687)	0.608 (0.758)	0.326 (0.353)	0.372 (0.354)
Post Investment Assessment		-0.424 (0.304)		-0.209 (0.347)		-0.562 (0.635)		0.378 (0.337)
Constant	0.938*** (0.141)	1.054*** (0.162)	0.631** (0.277)	0.720** (0.316)	0.803 (0.575)	1.156 (0.703)	0.278 (0.267)	0.125 (0.299)
Year Fixed Effects	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Investors	All	All	All	All	Buyout	Buyout	VC	VC
Observations	61	61	61	61	25	25	36	36
R ²	0.13	0.16	0.21	0.21	0.45	0.48	0.34	0.38