The Intangible Value of Key Talent: Decomposing Organization Capital

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Abstract

Intangible assets are a key contributor to firm value, enabling the firm to differentiate itself from competitors on the basis of its access to specialized, efficient, firm-specific information, activities and procedures, identified as organization capital (OC). Since OC contains a heterogeneous group of disparate items, we isolate firm value creation by decomposing OC into two major parts: (1) key talent in the form of compensation of top executives and (2) the residual component of OC. The results show that OC value creation originates from the key talent of the firm. Furthermore, residual OC creates systematic risk exposure, whereas key talent engenders idiosyncratic risk.

Keywords: Organization capital, Human capital, Executive compensation, Firm value, Idiosyncratic Risk, Systematic Risk
JEL classification: G12, G30, G34

1. Introduction

"The manner in which information is accumulated in a firm offers an explanation for the firm's existence. Information is an asset to the firm, since it affects the production possibility set and is produced jointly with output. We call this asset of the firm its organization capital." – Prescott and Visscher (1980)

A firm is more than a collection of assets. There is something intangible that identifies each firm and differentiates an Apple from a Microsoft. This intangible asset constitutes the firm's culture, internal knowledge and language, firm-specific policies and procedures, growth opportunities and information technology, brand name and any other aspects that are not directly related to the production process and are unique to the firm itself. There is a literature on organization capital, which attempts to measure this intangible asset that defines a firm and potentially enhances its value (Lev and Radhakrishnan (2005), Eisfeldt and Papanikolaou

(2013)). These studies have focused on various empirical constructions using overhead and non-allocated expenses as empirical measures of the firm's investment in the firm itself, rather than in the products it produces and sells. Selling, general and administrative (SG&A) expenses are considered the inputs into an intangible organization capital production function since these costs relate to the firm's operation but are not directly connected to the firm's outputs. If we consider SG&A the factors in an organization capital production function, we must specify the output. Since organization capital represents an investment in the firm itself, the output is the firm value. Thus, we examine the impact of organization capital on the firm's Tobin's q (market to book value). Our results are consistent with other studies that show that organization capital is positively related to firm performance (Lev, Radhakrishnan and Zhang (2009), Lev and Radhakrishnan (2005), Banker, Huang and Natarajan (2011), Chen, Lu and Sougiannis (2012), Eisfeldt and Papanikolaou (2013)).

However, SG&A expenditures encompass many different factors of production, ranging from personnel costs (i.e., for top executives and other non-allocated employees) to advertising and office rent and supplies. It is unreasonable to expect that these disparate factors of production all enter into the organization capital production function in the same manner. Thus, in this paper, we decompose the heterogeneous elements of SG&A into component parts in order to identify the portion of organization capital that drives value. An important component of organization capital is key talent, as represented by the firm's top executives. We utilize Execucomp data on executive compensation in order to isolate this component of organization capital. This allows us to determine whether the human capital component of organization capital increases firm value through the strategic advantage provided by key talent, or decreases firm value through empire building and entrenched management agency problems.

To address this question, we divide organization capital into two empirical measures: (1) the human capital component, defined as the capitalized value of compensation paid to top executives or key talent (denoted HC_OC), and (2) the residual comprised of all other elements of organization capital (denoted Residual_OC). This decomposition allows us to determine which component of organization capital drives firm value. In particular, higher investment in HC_OC may be value enhancing if executives diligently and effectively manage the firm. Alternatively, however, agency problems may lead to higher measures of HC_OC as highly remunerated and entrenched management pursues empire building or risk diversification

strategies at odds with shareholder value.[1] Similarly, our empirical approach allows us to determine whether the remainder of organization capital, measured by Residual_OC, enhances firm value. We find that the key talent component of organization capital enhances firm value (as measured by market to book value), whereas the Residual_OC does not contribute to firm value.

We address the endogeneity problem using a two-stage analysis. Our instrumental variables include competition from new entrants (on the 48 Fama-French industry level) and industry-adjusted organization capital. Utilizing alternative econometric methods, we find an economically and statistically significant positive relationship between key talent (HC_OC) and market to book value, whereas we find either no relationship or a significantly negative relationship between Tobin's q and Residual_OC.

Furthermore, our decomposition of organization capital allows us to more precisely measure the risk associated with key talent. We create five value-weighted portfolios sorted on OC_HC and Residual_OC individually in order to assess the risk characteristics of each component. We utilize CAPM, Fama-French three-factor model (Fama and French 1993) and Carhart four-factor model (Carhart 1997) for portfolios created using the quintiles of HC_OC and Residual_OC separately. The results show that high HC_OC firms do not have higher returns on average than low HC_OC firms, whereas high Residual_OC firms have positive and statistically significant average returns throughout the sample period. That is, high minus low HC_OC portfolios have no significant systematic risk incorporated into returns, whereas high minus low Residual_OC portfolios have a systematic risk premium. Thus, we find that there are two components of organization capital risk: idiosyncratic and systematic.

This result extends the work of Eisfeldt and Papanikolaou (2013), who contend that key talent poses a systematic risk to the firm as a result of the outside option executives have to leave the firm and take out their value enhancing contribution. Our decomposition allows us to pinpoint the source of the systematic risk associated with the loss of key talent. There is a component of key talent value production that is firm specific, since the outside option opportunity cost to the executive may be less valuable than the first best, continuation option of remaining in the firm. Prescott and Visscher (1980) state that "the information set that makes a person productive in one organization may not make that person as productive in another

[1] For example, Venieris, et al. (2015) find that costs are stickier when OC is high as management delays reductions in intangible investments in response to decreases in the firm's production level.

organization even if both firms produce identical output." The remuneration of key talent compensates executives for their next best employment opportunity, but not for the firm specific, idiosyncratic component, which is the value added to the firm that cannot be transferred when the executive departs. Therefore, the executive compensation component of organization capital does not include the systematic risk to the firm of the loss of key talent, but rather includes undiversifiable firm specific risk.

In contrast, the Residual_OC component does include systematic risk associated with key talent. Top executives compensate themselves for their undiversifiable risk in the firm through consumption of perquisites and empire building. This process contributes to the costs incorporated in SG&A for personnel, R&D, advertising, company amenities (such as planes and limousines) that are captured in Residual_OC. The agency costs of these undisclosed expenditures reduce firm value and expose shareholders to systematic risk. Therefore, isolating HC_OC allows us to disentangle the idiosyncratic from the systematic risk embedded in key talent. In sum, we find that HC_OC captures idiosyncratic risk, whereas Residual_OC captures systematic risk.

The paper proceeds as follows. The literature on organization capital is discussed in Section 2. Our empirical decomposition methodology and the impact of each of the components of organization capital on firm Tobin's q is analyzed in Section 3. Section 4 estimates the risk characteristics of each of the components of organization capital. Finally, Section 5 concludes.

2. Literature Review

The concept of organization capital dates back to economists' attempts to justify the existence of firms. Organizing assets into distinct companies occurs because these assets are more productive in unison than in isolation. That is, there is an intangible glue, called organization capital that connects the assets and makes them more productive. Organization capital incorporates the non-production related unique knowledge produced within the firm using the interaction of human capital and production technologies within themselves and among each other. Prescott and Visscher (1980) model the firm's organization capital in terms of improvements in the productivity of the firm's human capital, since the firm's knowledge of the capabilities of its individual employees improves efficiency by matching the worker to the best

job, by creating effective teams of employees and by investment in on-the-job training. Evenson and Westphal (1995) summarize the organization capital as: "the knowledge used to combine human skills and physical capital into systems for producing and delivering want-satisfying products. Carlin et.al. (2012) view the organization capital as a form of intra-firm language. This captures the idea that the value of organization capital depends on its being shared across managers and that it must be transmitted to the next generation of employees to be preserved. A firm's language includes informal work routines, convenient technical jargons, and a vocabulary of patterns remembered from past experiences. They show that firms with more organization capital have less employee turnover, and therefore, can invest over the long term. Eisfeldt and Papanikolaou (2013, 2014) identify the value of key talent as critical to the role of organization capital in creating firm value. Berk et al. (2016) find that actively managed mutual funds create value by reallocating funds based on the firm's private information about the skill of its money managers.

Organization capital encompasses the firm's know-how embedded in its work force. However, it is more than that. Indeed, Atkeson and Kehoe (2005) estimate that the payments to intangible capital represent about 8% of U.S. manufacturing output, with return on organization capital encompassing 40% of those payments. Corrado et al. (2009) attribute 30% of all intangible assets in the U.S. to organization capital (in their terms "firm-specific economic competancies"), representing the largest category. Moreover, Leung et al. (2016) find that organization capital impacts stock returns in 20 OECD countries. Organization capital includes the firm's intellectual capital embodied in research and development, growth opportunities and corporate culture with respect to innovations. Francis et al. (2015) connect the firm's organization capital to the number of patents granted. Martin-Oliver and Salas-Fumas (2012) show that organization capital increases firm value through the optimal deployment of the firm's investment in information technology and other material assets.

Whether investment in organization capital increases or decreases firm value is an empirical question. Oshima et al. (2008) view organization capital as entrepreneurial human capital that has been transformed from a non-tradable asset into tradable capital that is embedded in firm value. However, there are limits to the ability to write contracts based on this entrepreneurial talent. Organization capital is an intangible asset, and therefore, susceptible to agency problems which may reduce firm value. For example, Eisfeldt and Papanikolaou (2013)

highlight the role of key talent in building the firm's organization capital. However, these talented executives have an outside option to leave the firm and use their expertise at another firm. Thus, the firm's shareholders are exposed to the risk that key talent will depart, thereby taking valuable organization capital with them. Eisfeldt and Rampini (2008) show that capital is less efficiently reallocated during downturns because executives have capital control rights as a result of their private information about asset productivity. Venieris et al. (2015) also find that selling, general and administrative expenses are sticky due to managerial reluctance to reallocate capital during downturns. Thus, key talent can pursue private objectives (such as empire building or risk diversification) at odds with value maximization. Firms' shareholders provide incentive pay to induce managers to relinquish control rights. Eisfeldt and Papanikolaou (2013) find that organization capital makes firms riskier, resulting in a 4.5% increase in risk-adjusted returns. Lustig et al. (2011) find that shareholders must share economic rents with key talent to prevent them leaving the firm. This takes the form of pay for performance and greater inequality of income among the firm's employees. Further, Boguth et al. (2016) find that organization is capital, thereby exposing the firm to risk of loss. They estimate a 6% p.a. risk premium for organizational capital fragility, as measured by the size of the management team (the smaller the team, the more fragile the firm's OC).

Previous studies find significant association of higher executive compensation (included in SG&A expenses) with increasing agency problems between managers and shareholders of a firm. Agency theory argues that misalignment of interests between shareholders and managers could lead to agency problems, that is, managers engage in activities for their own benefits rather than the benefits of the firm's shareholders (Jensen and Meckling 1976). One well-known agency problem is managerial empire building, which refers to managers' tendencies to grow the firm beyond its optimal size or to maintain unutilized resources with the purpose of increasing personal utility from status, power, compensation, and prestige (Jensen (1986), Stulz (1990), Bebchuk, Fried and Walker (2002), Masulis, Wang, and Xie (2007), Hope and Thomas (2008), Chen, Lu and Sougiannis (2012)). For example, in his seminal paper on managers' utility-maximizing tendencies, Williamson (1963) specifically uses the expansion of staff (proxied by SG&A costs) beyond optimal levels as an example to illustrate the effects of managerial discretion on managers' opportunistic behavior.

Another agency problem is the managers' disincentives to downsize as they derive monetary and nonmonetary benefits from managing larger and more complex organizations; any benefits from downsizing accrue primarily to shareholders rather than managers; and managers may prefer the quiet life and try to avoid the difficult decisions and costly efforts associated with downsizing (Bertrand and Mullainathan (2003), Datta, Guthrie, Basuil, and Pandey (2010), Chen, Lu and Sougiannis (2012)).

There are a significant number of studies on the effect of executive compensation on firm performance. Some of these focus on the executive compensation structure and find evidence that equity compensation and managerial ownership have positive relationship with firm value (Mehran (1995), Chang, Dasgupta and Hilary (2009), Frydman and Saks (2010)), while, others show that the relationship has a nonlinear nature with an inverted-U shape (Morck, Shleifer and Vishny (1988), McConnell and Servaes (1990), McConnell, Servaes and Lins (2008), Coles, Lemmon and Meschke (2012)). There is also evidence in the literature that the relationship between managerial ownership and firm value is asymmetric in the sense that large increases in managerial ownership increases firm value, whereas large decreases do not result in decrease in firm value (Fahlenbrach and Stulz (2009)).

Another strand of this literature discusses the effect of CEOs on firm performance. Adams, Almeida and Ferreira (2009) and Villalonga and Amit (2006) find evidence that founder-CEOs increase firm value. Malmendier and Tate (2008) find evidence that award-winning CEOs subsequently underperform and that the ex-post consequences of media-induced superstar status for shareholders are negative. Bebchuk, Cremers, Peyer (2011) find that an increase in the fraction of aggregate compensation of the top-five executive team captured by the CEO leads to decreases in firm value.

In addition to the existing disagreement in the literature on the relationship between executive compensation and firm value, the problem with causality is also a severe one since the existing methods do not provide an agreed solution to endogeneity problem. On the one hand, instrumental variables approach has been used to mitigate the endogeneity concerns caused by reverse causality, but have shown to lead nonexistent empirical relationships that the structural models do not define (Coles, Lemmon and Meschke (2012)). On the other hand, while fixed-effects models alleviate the omitted variable bias significantly by taking care of unobserved firm heterogeneity, the lack of time variation in managerial ownership hamper the use of this

approach. Nevertheless in order to address the endogeneity concerns, we employ both methods in our analysis and get consistent results. Furthermore, our fixed effects model does not suffer from lack of time variation in the total executive compensation since it has increased significantly during the sample period (1992-2015). According to Bebchuk and Grinstein (2005), equity-based compensation tripled during the period 1993-2003 and cash compensation increased by 40% during the same period. Similarly, Shue and Townsend (2017) report that option compensation grew by more than six fold between 1992-2011; whereas, non-option compensation remained relatively flat during the same period.

In light of the previous findings in the literature and our research question, we hypothesize that:

Hypothesis 1. The key talent component of organization capital (HC_OC) enhances firm value whereas the Residual_OC does not contribute to firm value.

Hypothesis 2. There are two components of organization capital risk: idiosyncratic and systematic. High-minus-low HC_OC portfolios have no significant systematic risk incorporated into returns, whereas high-minus-low Residual_OC portfolios have a systematic risk premium.

3. OC and Firm Value:

3.1. Sample construction

We obtain financial data of firms and executive compensation from Compustat, CRSP, Execucomp and Thomson Reuters Form 13F filings databases for the period from 1992 to 2015. The period is restricted to 1992 because it is the earliest year Execucomp database is available. The Compustat sample consists of all firms with sales and total assets higher than $5 million excluding finance and utilities, as these industries are regulated and have different pricing mechanisms. We exclude those firms that have less than three consecutive years of data. We also exclude firms with gap years in the sample. Our final sample consists of 9,797 firm-year observations of 993 firms.

3.2. Variable definitions

We follow Faleye (2007) and measure Tobin's q as the market value of equity plus the book values of debt and preferred equity, all divided by the book value of assets. Our main variable of interest is the OC measure and its components; human capital (HC_OC) and residual

(Residual_OC). Previous studies use selling, general and administrative expenses item (SG&A) of the income statement as a proxy for OC measure (Lev, Radhakrishnan and Zhang (2009), Eisfeldt and Papanikolaou (2013)). Following Eisfeldt and Papanikolaou (2013), we construct the stock of OC with perpetual inventory method. Therefore we calculate the following equation;

$$OCstock_{it} = (1-\delta)OCstock_{it-1} + \frac{SG\&A_{it}}{cpi_t} \quad (1)$$

in which cpi_t denotes the consumer price index and δ is the depreciation rate. In order to implement the law of motion, we choose an initial stock by:

$$OCstock_{i0} = \frac{SG\&A_{i1}}{g+\delta_0} \quad (2)$$

As in Eisfeldt and Papanikolaou (2013), we use the depreciation rate of 15% and match the growth rate, *g,* with average real growth rate of firm-level SG&A expenditures, which is 7% in our sample. We scale this *OCstock* by the firm's book value of assets and denote this ratio as *OC*.

For the human capital component of OC measure, we capitalize the total executive compensation (item tdc1[2] in Execucomp) of top five executives that a firm reports on annual proxy (DEF14A SEC form).[3] We construct the HC_OC measure following the same procedure in Equations (1) and (2). As it is a proxy for the human capital of a firm, we use 1% depreciation rate[4] and 7% real growth rate of *OCstock* measure to avoid within firm and across firm volatility in executive compensation. Similar to *OCstock*, we scale this measure by firm's book value of assets. To construct Residual_OC, we subtract the dollar amount of total executive compensation from SG&A expenses and follow the procedure in Equations (1) and (2) using 15% depreciation

[2] This item includes both cash compensation and the value of stocks and options granted. However SG&A expenses don't include the value of options granted until 2005 when FAS 123r statement came into effect. Therefore, in our construction, we exclude the value of options granted from total executive compensation until 2005.

[3] To avoid heterogeneity of firms' reporting in ExecuComp, we limit our sample to firms with five executives listed in ExecuComp. Our results are robust to including total compensation to three or more executives listed in ExecComp.

[4] Previous studies find human capital depreciation rate between 0.1% to 0.8%. (Browning et.al.(1999), Ludwig et.al.(2012). Arrazola and Hevia (2004) find the depreciation rate to be 1% and 1.5% in Spain. Our results are robust to a depreciation rate in 0-1% interval. The robustness tests with δ=0 can be found in the Appendix.

rate and 7% real growth rate[5].

Besides organization capital and its components, there are other variables that affect firm value such as governance and firm performance measures. We measure firm governance using institutional ownership (Bethel, Liebeskind and Opler (1998)) and insider ownership. We also include the square of insider ownership to capture nonlinearity (Morck, Shleifer and Vishny (1998)). The institutional ownership data is from Thomson Reuters Form 13F filings. We collect data on insider ownership from Execucomp database. For firm performance measures we use Compustat variables. We follow Yermack (1996) and include profitability measured by return on assets (ROA), which is defined as the ratio of operating income before depreciation to total assets. We also include tangibility, defined as net property, plant and equipment scaled by total assets; leverage, defined as the ratio of long term debt to total assets; capital expenditures scaled by total assets; and firm age, defined as the number of years since IPO. We also control for firm size using the natural logarithm of book value of assets. To control for industry variations, we include 48 industry classifications from Fama and French (1997).

Table 1 presents summary statistics for the variables described above. As the table shows, the mean Tobin's q in our sample is 1.77. The SG&A item has a mean of $1,197.94 million whereas; total executive compensation is $10.75 million on average. Therefore the executive compensation component constitutes about 1% of SG&A expenses and the residual constitutes 99% of it. Accordingly, the OC measure has an average of 0.80. HC_OC has a mean of 0.06 and Residual_OC has a mean of 0.78. An average firm in the sample has size 7.64, which corresponds to $2 billion of total assets with 15% annual return on assets and the long-term debt constitutes 21% of the total assets. On average, institutional ownership is 68% of the firm's outstanding shares whereas; executives own 3% on average of a firm's shares.

3.3. Empirical analysis

3.3.1. Components of OC and firm value analysis

To test our first hypothesis, we estimate OLS and fixed effects regressions of firm value on OC and our two components of OC. We use Tobin's q as a proxy for firm value. Table 2

[5] Alternatively we define Residual_OC2 from the regression of OC on HC_OC variable to estimate a residual component of OC that is orthogonal to HC_OC. Our results are robust to either definition and are available in the Appendix.

presents our results. Using the OC coefficient shown in column (1) and the standard deviation on OC (from Table 1), a one standard deviation increase in OC increases firm value by 12% (0.74*0.16), statistically significant at the 1% significance level. Controlling for firm fixed effects in columns (2) and (3) to reduce omitted variable bias, actually increases the magnitude of the OC coefficients, even after controlling for the one period lagged dependent variable in column (3). One standard deviation increase in OC increases firm value by 27% (0.74*0.37) in column (2) and 16% (0.74*0.22) in column (3), both significant at the 1 % level.

When we estimate the individual impacts of components of OC on firm value, we find that the significant and positive impact on firm value comes from the stock of executive compensation to key talent, (HC_OC), whereas the residual component (Residual_OC) remains insignificant in all three estimations. Using the HC_OC standard deviation from Table 1, column (4) of Table 2 shows that a one standard deviation increase in HC_OC increases firm value by 23% (0.09*2.60), significant at the 1%. In column (5), a one standard deviation increase in HC_OC increases firm value by 38% (0.09*4.25), significant at the 1% level. These results support Hypothesis 1 that there is a statistically and economically significant increase in firm value from the key talent component of organization capital, rather than the residual component of organization capital, which has an insignificant coefficient in all regressions in columns (4), (5) and (6).

3.3.2. Resolving the endogeneity problem

Although we use lagged independent variables and firm fixed effects in our benchmark regression presented in Table 2, these measures are not enough to reduce the bias caused by endogeneity that arises due to reverse causality, selection bias and/or omitted variable bias. Therefore, we address the endogeneity problem in the Tobin's q regressions utilizing a two-stage panel data estimation approach. We identify two sets of instrumental variables for total OC and our decomposition of OC. For total OC, we define industry median OC as our first instrument, using the 48 Fama-French industry classifications. This adjusts for the level of organization capital that is customary for firms to compete in each industry. Our second instrumental variable adjusts for industry competitive pressure as measured by a New Entrant indicator variable, which takes a value of one for existing firms if there is a new firm entering the industry in any given year and zero otherwise. Therefore this variable captures whether an existing firm faces

competition in the form of new entry to the industry in any given year. Sanderson and Windmeijer (2016) multivariate F test of excluded instruments rejects the null that instruments are weak at 1% significance level with an F statistic of 49.81, thereby satisfying the relevance condition. In addition, both of these instruments are related to firm's market to book value only through OC, thereby satisfying the exclusion restriction. Lastly, Sargan-Hansen test statistic fails to reject the null that overidentifying restrictions are valid.

To address the endogeneity of HC_OC and Residual_OC, we utilize three instrumental variables. To adjust for competitive entry, we utilize New Entrant variable we define above as an instrumental variable. In addition, we use the industry median Residual_OC and the firm level salary component of total executive compensation (Salary_OC) as additional instruments. Industry median Residual_OC captures the baseline level of expenses that are required for all firms in the industry to remain competitive. By eliminating the executive compensation component of OC, industry-median residual_OC represents the costs to firms of competing with other firms in the industry. These costs include agency costs, such as empire building and disincentives to downsize. The industry median Residual_OC explains the components of organization capital without directly impacting the firm's market to book value. That is, firms compete for key talent by offering packages of executive compensation (HC_OC) and perquisites included in Residual_OC. The industry standard impacts the value of executives' outside option, and therefore, the expenditures of each firm in the industry. In order to satisfy the exclusion restriction criteria, we regress the industry median Residual_OC on firm's market to book and use the residual of this regression as our IV for both HC_OC and Residual_OC.

The third instrumental variable used to directly explain our OC components is the cash salary component of executive compensation, denoted Salary_OC. We follow the same procedure in Equations (1) and (2) to construct this measure. This variable directly impacts the HC_OC component of organization capital. It also impacts Residual_OC as key talent is compensated using a combination of cash salary, bonuses, performance pay and perquisites. To the extent that there is substitutability among these components of executives' compensation package, the Salary_OC instrumental variable directly impacts both HC_OC and Residual_OC. For example, increase in cash salary may be met with increases in perquisites and empire building especially when other components of executive compensation don't grow proportionately, thereby contributing to increases in Residual_OC. Tradeoffs among the

components of the executive pay package will impact the components of organization capital without directly impacting the firm's Tobin's q. Similar to our approach in industry median Residual_OC, we regress Salary_OC on firm's market to book value and use the residual of this regression as our IV in order to satisfy the exclusion restriction econometrically. Sargan-Hansen test statistic fails to reject the null that overidentifying restrictions are valid. Furthermore, Sanderson and Windmeijer (2016) multivariate F test of excluded instruments rejects the null that instruments are weak at 1% significance level for IVs of both components of OC. These show that both exclusion restriction and relevance conditions are met for both of our IV estimations.

We present the first stage of our two-stage estimation in Table 3. We find that a new entry of a firm into the industry reduces OC, HC_OC and Residual_OC, all significant at the 1% level. Thus, an increase in competitive pressure reduces the firm's ability to pass along overhead costs from executive compensation and other components of organization capital. That is, lower investments in organization capital are warranted as monopoly rents are eroded through new entry into the industry. The coefficient on industry median OC is positive and significant, indicating the baseline level of organization capital required for all firms in the industry. Finally, the coefficient estimate on the Salary_OC instrumental variable is significantly positive (at the 1% level) in Table 3, indicating that higher cash salaries paid to top executives contribute directly to higher HC_OC and to higher Residual_OC.

Our second stage results, presented in Table 4, provide evidence that even after controlling for endogeneity, we find that the value enhancing component of organization capital is HC_OC. A one standard deviation increase in instrumented HC_OC[6] increases Tobin's q by 68% (0.05*13.74) at the 1% level of statistically significance. Moreover, we find that the coefficient on Residual_OC is negative and statistically significant at the 1% level. Indeed, a one standard deviation increase in Residual_OC erodes an average firm's market to book value (0.39*2.67 equals to 1.04). Thus, the two-stage analysis suggests that HC_OC enhances firm value, whereas Residual_OC decreases firm value.

4. Organization Capital Risk

[6] The standard deviation of instrumented HC_OC from the first stage if 0.05 and the standard deviation of instrumented Residual_OC is 0.39.

In our second hypothesis, we argue that there are two components of organization capital risk: idiosyncratic and systematic. In order to test this, we estimate CAPM, Fama-French three-factor model (Fama and French 1993) and Carhart four-factor model (Carhart 1997) for five portfolios of firms sorted on HC_OC and Residual_OC separately within each year and industry.

4.1. Sample construction

Data on risk factors are from Kenneth French's website. We obtain monthly stock returns data from CRSP and match each year's HC_OC and Residual_OC, calculated using the Compustat data described in section 2 for the period from 1992 to 2015. Our sample includes all nonfinancial firms in Compustat with fiscal year ending in December with common shares that are traded on NYSE, AMEX, or NASDAQ and that have nonmissing SIC codes and nonzero values of HC_OC and Residual_OC.

Following Eisfeldt and Papanikolaou (2013) we first group firms into 17 industries based on the Fama and French (1997) classification. Then, within each industry and each year, we sort firms into five subportfolios based on HC_OC (Residual_OC). We then pool the subportfolios across industries and years to form five portfolios of firms sorted on HC_OC (Residual_OC), where the breakpoints are industry and year specific. Finally, we form five value-weighted portfolios based on each firm's within-industry HC_OC (Residual_OC) rank in each year, and rebalance these portfolios in June every year. Therefore, portfolio 1 (5) contains firms in the lowest (highest) HC_OC (Residual_OC) quintile in each year and industry.

4.2. Asset Prices of portfolios sorted on components of OC

We present our asset pricing results for portfolios sorted on HC_OC in Table 5 and on Residual_OC in Table 6. As in Eisfeldt and Papanikolaou (2013), in addition to estimating CAPM, Fama and French three-factor and Carhart four-factor models, we also use high-minus-low portfolio of both HC_OC and Residual_OC as additional risk factors in panel B of Table 5 and 6, respectively. These results show that the beta of high-minus-low HC_OC and Residual_OC portfolios increase from low to high quintile portfolios suggesting that both components of OC are sources of risk that increase monotonically from low to high portfolios. However, when controlled for other factors, alpha of high-minus-low HC_OC portfolio (5-1) becomes positive but insignificant whereas, alpha of high-minus-low Residual_OC portfolio (5-

1) becomes positive and significant. Only in the four-factor model presented in panel D of Table 6 does the significance of alpha in high-minus-low (5-1) fall below generally accepted levels. Yet, it is still three times higher than the magnitude of alpha in high-minus-low HC_OC portfolio (5-1) in panel D of Table 6.

These results support our second hypothesis that HC_OC fluctuations engender firm-specific idiosyncratic risk since there is no risk premium required for diversifiable risk. However, Residual_OC encompasses systematic risk that exposes firms with high Residual_OC portfolios to the risks associated with agency costs, empire building and perquisite consumption. Our results suggest that the risk premium of high-minus-low Residual_OC portfolio (5-1) corresponds to 6.36% higher annual returns in three-factor model and 3.8% higher annual return in four-factor model.

5. Conclusion

We introduce a new decomposition of the aggregate organization capital measure used in the literature to explain intangible firm value. We distinguish the contribution of key talent, as measured by executive compensation, from the remainder of organization capital. We find that key talent is an important value creation vehicle for firms. However, investment in the remaining component of organization capital actually reduces firm value.

We also examine the risk characteristics of each of our newly introduced components of organization capital. We find that the human capital component of organization capital exposes shareholders to company-specific, idiosyncratic risk. Thus, there is no key talent risk premium. In contrast, however, the residual component of organization capital engenders systematic risk, offering a risk premium that is significant both economically and statistically. We attribute this to the inclusion of agency costs in residual organization capital. That is, the residual organization capital includes perquisite consumption, agency building and other value reducing activities pursued by key talent. The value created by executives empowers them to demand these intangible benefits, thereby exposing shareholders to systematic risk.

Table 1: Summary Statistics

Variable	Obs	Mean	Std.Dev.	Q1	Median	Q3
Tobin's q	9,797	1.77	1.35	0.97	1.37	2.05
SG&A expenses ($ millions)	9,797	1197.95	3665.87	110.45	287.39	827.96
Total Executive Compensation ($ millions)	9,797	10.75	12.41	3.29	6.61	13.29
OC	9,790	0.80	0.74	0.29	0.57	1.06
HC_OC	9,790	0.06	0.09	0.02	0.03	0.07
Residual_OC	9,790	0.78	0.73	0.28	0.56	1.04
Institutional ownership	9,797	0.68	0.23	0.56	0.71	0.84
Managerial ownership	9,797	0.03	0.06	0.00	0.01	0.02
Managerial ownership^2	9,797	0.00	0.02	0.00	0.00	0.00
Size	9,797	7.64	1.57	6.50	7.53	8.67
Tangibility	9,792	0.31	0.23	0.12	0.25	0.44
Leverage	9,797	0.21	0.19	0.05	0.16	0.30
ROA	9,797	0.15	0.11	0.10	0.14	0.19
Firm Age	9,744	0.06	0.06	0.02	0.04	0.08
Capex/TA	9,717	27.43	23.03	10.00	20.00	39.00
New entrant dummy	9,797	0.32	0.46	0	0	1
Industry median OC	9,797	0.67	0.42	0.39	0.59	0.92
Industry median Residual_OC	9,797	0.01	0.40	-0.26	-0.08	0.23
Salary_OC (residual)	9,794	0.00	0.06	-0.04	-0.02	0.02

Table 2: Tobin's q regressions with OC and components of OC

The dependent variable in all regressions is Tobin's q, defined as the market value of equity plus the book values of debt and preferred equity, all divided by the book value of assets. Regressions in columns (1) and (4) are OLS estimations with industry and year fixed effects. Other estimations include firm and year fixed effects. Columns (3) and (6) include lagged dependent variable as a control. All independent variables are one period lagged. In all estimations the standard errors are clustered at the firm level. The sample period is 1992 to 2015. *, ** and *** indicate 10%, 5% and 1% significance levels, respectively.

Dependent variable: M/B	(1)	(2)	(3)	(4)	(5)	(6)
OC_{t-1}	0.160***	0.376***	0.221***			
	(3.87)	(5.15)	(4.16)			
HC_OC_{t-1}				2.601***	4.250***	2.590***
				(5.29)	(4.30)	(4.15)
$Residual\_OC_{t-1}$				0.053	0.105	0.059
				(1.33)	(1.26)	(1.01)
M/B_{t-1}			0.538***			0.530***
			(17.62)			(17.31)
$Institutional\ Ownership_{t-1}$	-0.047	-0.163*	-0.232***	-0.003	-0.064	-0.171**
	(0.44)	(1.74)	(3.18)	(0.03)	(0.74)	(2.56)
$Managerial\ Ownership_{t-1}$	0.906	3.162**	1.922*	-0.068	2.848*	1.748*
	(0.77)	(2.10)	(1.92)	(0.05)	(1.93)	(1.80)
$Managerial\ Ownership^2_{t-1}$	-2.766	-7.430*	-4.912*	-1.025	-7.033*	-4.705*
	(0.85)	(1.85)	(1.92)	(0.30)	(1.82)	(1.89)
$Standardized\ Size_{t-1}$	-0.029*	-0.263***	-0.136***	-0.012	-0.278***	-0.147***
	(1.67)	(2.76)	(2.64)	(0.70)	(2.86)	(2.77)
$Tangibility_{t-1}$	-0.432***	-0.596**	-0.130	-0.341**	-0.454	-0.050
	(2.68)	(2.00)	(0.75)	(2.13)	(1.57)	(0.30)
$Leverage_{t-1}$	-1.763***	-1.003***	-0.173*	-1.626***	-0.922***	-0.136
	(11.10)	(7.13)	(1.89)	(10.16)	(6.57)	(1.51)
ROA_{t-1}	3.950***	2.269***	0.440**	3.959***	2.261***	0.462**
	(6.05)	(3.98)	(2.16)	(6.23)	(4.09)	(2.28)
$Firm\ age_{t-1}$	-0.004***	0.007	0.001	-0.002**	0.003	-0.002
	(3.72)	(1.53)	(0.34)	(2.01)	(0.55)	(0.49)
$Capex/TA_{t-1}$	0.967**	0.309	-0.435	0.706	0.254	-0.457
	(2.21)	(0.81)	(1.55)	(1.62)	(0.68)	(1.64)
Constant	1.890***	1.328***	0.709***	1.838***	1.330***	0.718***
	(7.81)	(5.16)	(4.01)	(7.67)	(5.22)	(4.07)
Firm Fixed Effects	NO	YES	YES	NO	YES	YES
Industry Fixed Effects	YES	NO	NO	YES	NO	NO
Year Fixed Effects	YES	YES	YES	YES	YES	YES
R^2	0.36	0.19	0.43	0.38	0.20	0.43
N	9,151	9,151	9,151	9,151	9,151	9,151

Table 3: First stage regressions of Panel IV

The instruments for OC are industry median OC and new entrant dummy variable, which takes a value of one for existing firms if there is a new firm entering the industry in any given year and zero otherwise. Instruments for HC_OC and Residual_OC are the new entrant variable, industry median Residual_OC and firm level Salary_OC, which is defined using cash salary component of total executive compensation and capitalized using the procedures in Equation (1) and (2). All independent variables are one period lagged. In all estimations the standard errors are clustered at the firm level. The sample period is 1992 to 2015. *, ** and *** indicate 10%, 5% and 1% significance levels, respectively.

Dependent variable:	OC	HC_OC	Residual_OC
Industry median OC $_{t-1}$	0.393***		
	(8.18)		
New entrant $_{t-1}$	-0.042***	-0.002***	-0.028***
	(5.36)	(3.07)	(3.96)
Industry median Residual_OC $_{t-1}$		-0.009**	0.238***
		(2.56)	(5.01)
Salary_OC $_{t-1}$		0.715***	3.840***
		(16.80)	(10.78)
Institutional Ownership $_{t-1}$	-0.206***	-0.010***	-0.071*
	(4.78)	(2.75)	(1.95)
Managerial Ownership$_{t-1}$	0.280	0.050	0.109
	(0.49)	(1.06)	(0.23)
Managerial Ownership$^2_{t-1}$	0.178	-0.076	0.147
	(0.11)	(0.60)	(0.11)
Standardized Size$_{t-1}$	-0.110***	-0.006***	-0.114***
	(5.62)	(4.62)	(5.43)
Tangibility$_{t-1}$	0.359**	0.007	0.376***
	(2.53)	(0.94)	(2.84)
Leverage$_{t-1}$	-0.051	-0.010**	-0.044
	(0.87)	(2.42)	(0.83)
ROA$_{t-1}$	-0.406***	-0.010	-0.180*
	(3.16)	(0.82)	(1.72)
Firm age$_{t-1}$	-0.010*	0.002***	0.013**
	(1.78)	(2.75)	(2.38)
Capex/TA$_{t-1}$	-0.091	-0.010	-0.082
	(0.50)	(0.85)	(0.56)
Firm Fixed Effects	YES	YES	YES
Industry Fixed Effects	NO	NO	NO
Year Fixed Effects	YES	YES	YES
SW F statistic of excluded instruments	49.81	28.83	30.80
(p-value)	(0.0000)	(0.0000)	(0.0000)
N	9,151	9,151	9,151

Table 4: Second stage regressions of Panel IV

The dependent variable in all regressions is Tobin's q, defined as the market value of equity plus the book values of debt and preferred equity, all divided by the book value of assets. OC, HC_OC and Residual_OC variables are the estimates from the first stage regressions in Table 3. The instruments for HC_OC and Residual_OC are the new entrant variable, industry median Residual_OC and firm level Salary_OC, which is defined using cash salary component of total executive compensation and capitalized using the procedures in Equation (1) and (2). All independent variables are one period lagged. In all estimations the standard errors are clustered at the firm level. The sample period is 1992 to 2015. *, ** and *** indicate 10%, 5% and 1% significance levels, respectively.

Dependent variable: M/B	(1)	(2)
OC_{t-1}	0.729**	
	(2.44)	
HC_OC_{t-1}		13.740***
		(3.07)
$Residual\_OC_{t-1}$		-2.676***
		(4.08)
Institutional Ownership $_{t-1}$	-0.111	-0.360***
	(0.94)	(2.85)
$Managerial\ Ownership_{t-1}$	3.218**	3.391*
	(1.99)	(1.87)
$Managerial\ Ownership^2_{t-1}$	-7.785*	-7.112
	(1.84)	(1.46)
$Standardized\ Size_{t-1}$	-0.237**	-0.539***
	(2.47)	(3.85)
$Tangibility_{t-1}$	-0.721**	0.617
	(2.15)	(1.14)
$Leverage_{t-1}$	-1.086***	-1.069***
	(7.70)	(5.37)
ROA_{t-1}	2.468***	1.675***
	(4.20)	(2.94)
$Firm\ age_{t-1}$	-0.061***	-0.086***
	(2.87)	(3.82)
$Capex/TA_{t-1}$	0.384	0.068
	(0.99)	(0.11)
Firm Fixed Effects	YES	YES
Industry Fixed Effects	NO	NO
Year Fixed Effects	YES	YES
Sargan overidentification test statistic	0.254	1.659
(p-value)	(0.6145)	(0.1977)
N	9,127	9,127

Table 5: Asset Pricing: Five portfolios sorted on HC_OC

This table shows asset-pricing estimations for five portfolios sorted on HC_OC over book value of assets relative to their industry peers within each year. In Panel A we report portfolio alphas and betas of a regression of excess portfolio returns on excess returns of the market portfolio. In Panel B we report portfolio alphas and betas of a regression of excess portfolio returns on excess returns of the market portfolio and the Fama and French (1993) SMB and HML factors. In Panel C we report portfolio alphas and betas of a regression of excess portfolio returns on excess returns of the market portfolio and the Fama and French (1993) SMB and HML factors. In Panel D we report portfolio alphas and betas of a regression of excess portfolio returns on excess returns of the market portfolio, the Fama and French (1993) SMB and HML factors and the Carhart (1997) MOM factor. Data on SMB, HML, and MOM are from Kenneth French's website. The sample period is June 1992 to December 2015. All portfolio returns correspond to value-weighted returns by firm market capitalization.

Panel A: CAPM

	1	2	3	4	5	5 -1
α	0.131	0.265*	0.237	0.147	0.424*	0.293
	(1.00)	(1.80)	(1.48)	(0.84)	(1.95)	(1.04)
β_{MKT}	0.896***	0.938***	1.034***	1.010***	1.086***	0.190**
	(22.83)	(19.57)	(18.82)	(19.68)	(16.14)	(2.11)
R^2	0.78	0.76	0.76	0.73	0.65	0.03

Panel B: two-factor model

	1	2	3	4	5
α	0.221**	0.253*	0.168	0.060	0.221**
	(2.31)	(1.74)	(1.16)	(0.41)	(2.31)
β_{MKT}	0.954***	0.930***	0.989***	0.954***	0.954***
	(32.54)	(21.07)	(22.97)	(23.66)	(32.54)
β_{HMLHC}	-0.306***	0.041	0.236***	0.297***	0.694***
	(8.69)	(0.79)	(4.55)	(6.77)	(19.72)
R^2	0.88	0.76	0.80	0.80	0.93

Panel C: three-factor model

	1	2	3	4	5	5 -1
α	0.169	0.233*	0.185	0.075	0.336*	0.167
	(1.52)	(1.66)	(1.19)	(0.46)	(1.76)	(0.75)
β_{MKT}	0.942***	0.982***	1.032***	0.989***	1.017***	0.075
	(29.70)	(22.86)	(19.67)	(19.53)	(16.13)	(1.02)
β_{SMB}	-0.317***	-0.110**	0.153**	0.300***	0.563***	0.881***
	(5.86)	(2.25)	(2.47)	(4.88)	(5.26)	(8.97)
β_{HML}	-0.072	0.144**	0.160**	0.204***	0.206**	0.279**
	(1.03)	(2.13)	(2.06)	(2.69)	(2.07)	(2.17)
R^2	0.83	0.78	0.77	0.77	0.74	0.40

Panel D: four-factor model

	1	2	3	4	5	5 -1
α	0.269**	0.293**	0.221	0.076	0.376*	0.107
	(2.54)	(2.05)	(1.34)	(0.44)	(1.94)	(0.46)
β_{MKT}	0.892***	0.951***	1.015***	0.989***	0.997***	0.105
	(31.18)	(21.28)	(20.54)	(17.80)	(17.01)	(1.48)
β_{SMB}	-0.300***	-0.099**	0.159**	0.300***	0.571***	0.870***
	(6.52)	(2.08)	(2.55)	(4.93)	(5.52)	(8.45)
β_{HML}	-0.116*	0.118**	0.144**	0.203**	0.189**	0.305**
	(1.81)	(1.98)	(2.09)	(2.58)	(2.14)	(2.50)
β_{MOM}	-0.126***	-0.076*	-0.045	-0.000	-0.051	0.075
	(3.23)	(1.81)	(0.71)	(0.01)	(0.72)	(0.78)
R^2	0.85	0.78	0.77	0.77	0.74	0.41

Table 6: Asset Pricing: Five portfolios sorted on Residual_OC

This table shows asset-pricing estimations for five portfolios sorted on Residual_OC over book value of assets relative to their industry peers within each year. In Panel A we report portfolio alphas and betas of a regression of excess portfolio returns on excess returns of the market portfolio. In Panel B we report portfolio alphas and betas of a regression of excess portfolio returns on excess returns of the market portfolio and the Fama and French (1993) SMB and HML factors. In Panel C we report portfolio alphas and betas of a regression of excess portfolio returns on excess returns of the market portfolio and the Fama and French (1993) SMB and HML factors. In Panel D we report portfolio alphas and betas of a regression of excess portfolio returns on excess returns of the market portfolio, the Fama and French (1993) SMB and HML factors and the Carhart (1997) MOM factor. Data on SMB, HML, and MOM are from Kenneth French's website. The sample period is June 1992 to December 2015. All portfolio returns correspond to value-weighted returns by firm market capitalization.

Panel A: CAPM

	1	2	3	4	5	5 -1
α	-0.113	0.080	0.334**	0.290**	0.466***	0.579***
	(0.72)	(0.55)	(2.45)	(2.02)	(2.74)	(2.63)
β_{MKT}	1.026***	0.993***	0.808***	0.808***	0.653***	-0.373***
	(27.35)	(23.42)	(21.13)	(18.54)	(14.63)	(6.44)
R^2	0.77	0.78	0.73	0.70	0.53	0.18

Panel B: two-factor model

	1	2	3	4	5
α	0.149	0.148	0.318**	0.234	0.149
	(1.21)	(1.02)	(2.36)	(1.57)	(1.21)
β_{MKT}	0.858***	0.949***	0.819***	0.844***	0.858***
	(26.20)	(24.71)	(20.52)	(20.37)	(26.20)
β_{HMLRes}	-0.452***	-0.119**	0.028	0.096*	0.548***
	(9.71)	(2.30)	(0.55)	(1.89)	(11.78)
R^2	0.86	0.79	0.73	0.71	0.76

Panel C: three-factor model

	1	2	3	4	5	5 -1
α	-0.091	0.145	0.285**	0.277**	0.439***	0.530**
	(0.62)	(1.06)	(2.23)	(2.16)	(2.68)	(2.51)
β_{MKT}	1.057***	0.995***	0.855***	0.878***	0.697***	-0.359***
	(28.99)	(27.20)	(26.53)	(23.43)	(16.39)	(6.55)
β_{SMB}	-0.201***	-0.196***	-0.074	-0.283***	-0.123**	0.078
	(3.22)	(3.97)	(1.21)	(4.98)	(2.21)	(0.97)
β_{HML}	-0.038	-0.201***	0.200***	0.112*	0.128	0.166
	(0.55)	(3.28)	(3.24)	(1.73)	(1.58)	(1.53)
R^2	0.78	0.80	0.76	0.77	0.55	0.19

Panel D: four-factor model

	1	2	3	4	5	5 -1
α	0.034	0.253*	0.325**	0.335***	0.353**	0.318
	(0.24)	(1.91)	(2.56)	(2.61)	(2.18)	(1.58)
β_{MKT}	0.994***	0.941***	0.835***	0.849***	0.741***	-0.253***
	(27.40)	(26.07)	(22.86)	(21.55)	(16.98)	(4.72)
β_{SMB}	-0.179***	-0.177***	-0.067	-0.272***	-0.139**	0.040
	(3.26)	(4.00)	(1.13)	(5.12)	(2.46)	(0.55)
β_{HML}	-0.092	-0.247***	0.182***	0.086	0.165**	0.258**
	(1.53)	(4.52)	(3.03)	(1.37)	(2.08)	(2.55)
β_{MOM}	-0.158***	-0.136***	-0.051	-0.074**	0.109***	0.267***
	(4.47)	(3.67)	(1.46)	(1.98)	(3.05)	(5.16)
R^2	0.80	0.82	0.76	0.78	0.57	0.30

Appendix

Table 1A: Tobin's q regressions on components of OC (with δ=0)

The dependent variable in all regressions is Tobin's q, defined as the market value of equity plus the book values of debt and preferred equity, all divided by the book value of assets. We calculate HC_OC with no depreciation of human capital ($\delta = 0$). Regression in columns (1) is OLS estimation with industry and year fixed effects. Other estimations include firm and year fixed effects. Column (3) includes lagged dependent variable as a control. All independent variables are one period lagged. In all estimations the standard errors are clustered at the firm level. The sample period is 1992 to 2015. *, ** and *** indicate 10%, 5% and 1% significance levels, respectively.

Dependent variable: M/B	(1)	(2)	(3)
HC_OC_{t-1}	2.223***	3.686***	2.265***
	(5.24)	(4.32)	(4.21)
Residual_OC_{t-1}	0.054	0.105	0.058
	(1.34)	(1.26)	(0.99)
M/B_{t-1}			0.530***
			(17.31)
$\text{Institutional Ownership}_{t-1}$	-0.003	-0.064	-0.170**
	(0.03)	(0.74)	(2.56)
$\text{Managerial Ownership}_{t-1}$	-0.051	2.849*	1.747*
	(0.04)	(1.93)	(1.79)
$\text{Managerial Ownership}^2_{t-1}$	-1.072	-7.020*	-4.695*
	(0.31)	(1.81)	(1.88)
$\text{Standardized Size}_{t-1}$	-0.012	-0.278***	-0.146***
	(0.71)	(2.85)	(2.76)
Tangibility_{t-1}	-0.342**	-0.457	-0.052
	(2.14)	(1.58)	(0.30)
Leverage_{t-1}	-1.629***	-0.922***	-0.135
	(10.17)	(6.56)	(1.50)
ROA_{t-1}	3.959***	2.267***	0.466**
	(6.23)	(4.09)	(2.30)
Firm age_{t-1}	-0.002**	0.002	-0.002
	(2.04)	(0.47)	(0.55)
Capex/TA_{t-1}	0.712	0.259	-0.455
	(1.63)	(0.70)	(1.63)
Constant	1.842***	1.336***	0.721***
	(7.69)	(5.24)	(4.09)
Firm Fixed Effects	NO	YES	YES
Industry Fixed Effects	YES	NO	NO
Year Fixed Effects	YES	YES	YES
R^2	0.38	0.20	0.43
N	9,151	9,151	9,151

Table 2A: Tobin's q regressions on components of OC

The dependent variable in all regressions is Tobin's q, defined as the market value of equity plus the book values of debt and preferred equity, all divided by the book value of assets. Residual_OC2 is the residual of regression of OC on HC_OC. Regression in columns (1) is OLS estimation with industry and year fixed effects. Other estimations include firm and year fixed effects. Column (3) includes lagged dependent variable as a control. All independent variables are one period lagged. In all estimations the standard errors are clustered at the firm level. The sample period is 1992 to 2015. *, ** and *** indicate 10%, 5% and 1% significance levels, respectively.

Dependent variable: M/B	(1)	(2)	(3)
HC_OC_{t-1}	2.781***	4.609***	2.794***
	(6.00)	(5.31)	(4.99)
$\text{Residual\_OC2}_{t-1}$	0.054	0.104	0.056
	(1.37)	(1.24)	(0.97)
M/B_{t-1}			0.530***
			(17.31)
$\text{Institutional Ownership}_{t-1}$	-0.012	-0.279***	-0.147***
	(0.70)	(2.86)	(2.77)
$\text{Managerial Ownership}_{t-1}$	-0.002	-0.064	-0.171**
	(0.02)	(0.74)	(2.56)
$\text{Managerial Ownership}^2_{t-1}$	-0.070	2.846*	1.747*
	(0.06)	(1.93)	(1.80)
$\text{Standardized Size}_{t-1}$	-1.020	-7.027*	-4.703*
	(0.30)	(1.82)	(1.89)
Tangibility_{t-1}	-0.339**	-0.453	-0.049
	(2.12)	(1.57)	(0.29)
Leverage_{t-1}	-1.625***	-0.922***	-0.136
	(10.15)	(6.57)	(1.51)
ROA_{t-1}	3.958***	2.261***	0.462**
	(6.23)	(4.09)	(2.28)
Firm age_{t-1}	-0.002**	0.003	-0.002
	(2.01)	(0.54)	(0.50)
Capex/TA_{t-1}	0.704	0.254	-0.458
	(1.62)	(0.68)	(1.64)
Constant	1.866***	1.390***	0.752***
	(7.83)	(5.81)	(4.64)
Firm Fixed Effects	NO	YES	YES
Industry Fixed Effects	YES	NO	NO
Year Fixed Effects	YES	YES	YES
R^2	0.38	0.20	0.43
N	9,151	9,151	9,151

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