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Leadership Pulse™ Research Results  
from July, 2006 Pulse Dialogue™

**Update on Energy Pulse™ Trends**

**and**

**Human Capital: What Executives Think and  
What Drives Performance**

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## Executive Summary

The current Leadership Pulse report covers two topics: energy pulse trend data and the role of various components of business capital in driving firm performance. We have been trending leader energy because it is a key indicator of performance, and due to simplicity in using only one question, it works for our busy audience of senior executives. The other subject of study is an examination of various components of business capital.

Human capital, in particular, is a topic of much interest today. There are efforts to measure human capital, assign value to human capital, and improve the value of human capital through programs such as employee engagement, compensation, improved talent management, selection, and more. But in the quest to further elaborate on the value of human capital, very few studies have examined the relative importance of human vs. other components of capital. This Leadership Pulse study contributes to filling that gap. Building on a set of studies that I have done over the years predicting initial public offering (IPO) firm performance, this Leadership Pulse study examines the degree to which human capital vs. other types of capital are perceived as important by the executives who run major organizations. The research then investigates which components of capital really drive business performance. The bottom line findings are that:

- When directly compared to other components of capital, human capital does not rank as the most important.
- However, when you ask an audience of senior leaders which component of business capital is most under-rated, human capital is the #1 answer.
- When you analyze all components of capital using firm performance as the discriminating factor, human capital rises to the top of the list. Firms that value human capital outperform their competitor firms. Thus, human capital is a competitive “weapon” in the battle to win new business and grow existing business.
- However, having human capital is not enough. Consistent with prior studies, our analysis of the data tells the story that it’s the way you utilize your human capital that drives performance.

I hope that you enjoy reading the contents of the report. If you have comments or feedback on the results, please write to me at: [theresa@eepulse.com](mailto:theresa@eepulse.com).

*Theresa M. Welbourne, Ph.D.*

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## Introduction

I have a number of job titles these days, and one of them is editor of *Human Resource Management*, a journal published by Wiley in partnership with both the Society of Human Resource Management and the University of Michigan. This year's winner of the Ulrich-Lake Best Paper Award went to a manuscript titled "How leveraging human resource capital with its competitive distinctiveness enhances the performance of commercial and public organizations" by Abraham Carmeli and John Schaubroeck<sup>1</sup>. The story this paper tells is that having great human capital is not enough to drive superior firm performance. You need both high quality human capital and managers who know how to use that human capital.

The findings of this paper built on work that I did earlier on the predictors of initial public offering (IPO) performance. In a series of studies I conducted and in a paper that I wrote with Dr. Patrick Wright of Cornell University<sup>2</sup> I examined several different resources that could affect firm performance. The goal of the work was to move the study of human capital to the total world of business and examine how human vs. other types of capital were perceived by executives who run major corporations. I also was interested in testing perception vs. reality to determine which resources really do predict long-term firm performance, defining performance as stock price growth, earnings per share growth, sales growth, and even firm survival. The results from the IPO studies were similar to those of Carmeli and Schaubroeck. Human capital alone was not enough; significant interaction effects were found for human capital and management. Thus, having great talent will not drive firm performance. Instead, placing value on both human capital and management (the capital that needs to utilize the total human capital) predicted firm performance.

This Leadership Pulse study takes those ideas one step further. I used a shorter set of business capital components and asked respondents to rate the importance of each and to relate this importance to performance indicators. I also asked the participants to comment on their responses. My goals were twofold (1) to extend and update the earlier research, and (2) to use the results to develop a leadership tool for ongoing case studies within organizations. Anyone interested in participating in this work can contact me at: [theresa@eepulse.com](mailto:theresa@eepulse.com).

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<sup>1</sup> Carmeli, A. and Schaubroeck, J. (2005), How leveraging human resource capital with its competitive distinctiveness enhances the performance of commercial and public organizations. *Human Resource Management*, 44(4), 391-412.

<sup>2</sup> Welbourne, T.M. & Wright, P.M. Which resources matter in initial public offering firms? A longitudinal comparison of five resources contributions to firm performance. Working paper, Cornell University.

## The Leadership Pulse Study

The Leadership Pulse research taps into a large sample of executives (over 4,000 to date) who have agreed to participate in short, Pulse Dialogues (our word for short surveys<sup>3</sup>) conducted every two months. We gather data on topics of strategic importance to leaders and then provide results to those who participate in this study. Our goal is to learn from data, create a dialogue around the subjects we study and help leaders continually learn so they can use the data to bring value to their organizations. The results presented in this report are from the Pulse Dialogue that closed on July 26<sup>th</sup>, 2006. An earlier power point presentation and individual personal reports were made available to all participants approximately three weeks after the closing of the Pulse Dialogue.

### ***Who responded to the Pulse Dialogue?***

A total of 280 leaders participated in this Leadership Pulse. See Appendix A for complete sample characteristics.

#### *A look at company size*

Fifty-two percent of respondents came from companies with less than 500 employees. Thirteen percent work at companies whose size ranged from 501 to 5000 employees, and the remaining 14% work at companies with more than 5000 employees, and 20.3% of respondents did not provide this information.

#### *Jobs of the respondents*

Of those who responded, approximately 30% were in C-core jobs (e.g., CEO, CFO, CIO, etc.), 15% were VP level, and 16% were at the Director level. The remaining 18% came from senior managers, managers, and non-managerial professionals. Two-percent were external consultants; 20% of the sample did not provide job level data.

#### *Industry representation*

Participants represent a wide range of industries, including 21% from manufacturing, 20% from the science and information technology sectors, 14% from wholesale and retail services, 21% from professional services, 10.5% from government, utilities and not-for-profits, and 2.5% of the sample did not provide industry data.

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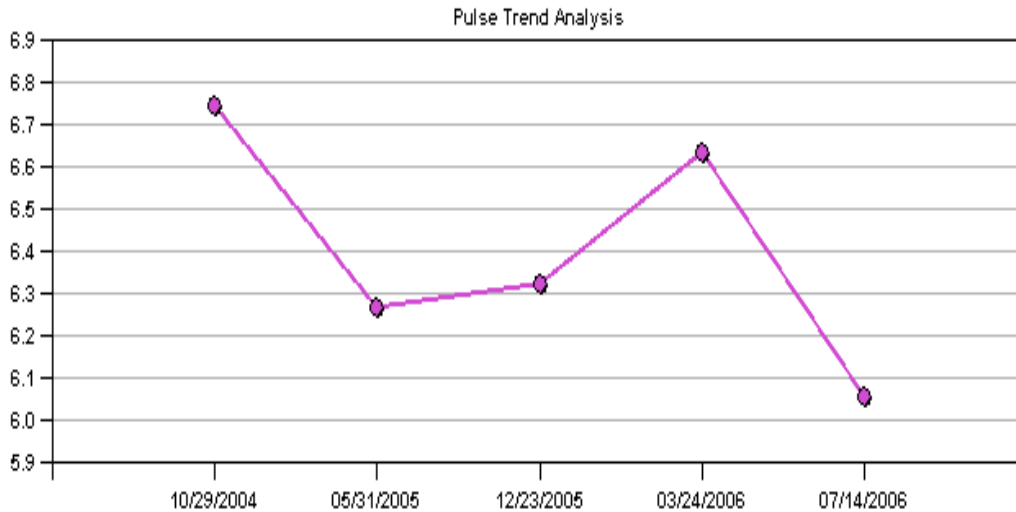
<sup>3</sup> I have changed the word to Pulse Dialogue as a signal that the process used is an attempt to evolve the traditional survey process. For example, the dialogues are done on a more frequent basis with fewer questions, and we provide everyone who participates with results and multiple ways to engage in dialogue about the results. In addition, participants receive personal reports that compare their own results to averages for people in their industry and the overall sample. We think the dialogue and learning is the key to this information exchange, where in traditional surveys scores and one-way communication are the overall goals.

**Energy Pulse™**

As part of the on-going research, the Leadership Pulse tracks leaders' energy levels over time. Background information on energy and validation of the Energy Pulse metric can be found on the eePulse web site ([www.eepulse.com](http://www.eepulse.com)). However, numerous multi-firm and within-firm studies have demonstrated that the one-item energy question predicts (using longitudinal, predictive research methods) turnover, customer service scores, sales, absenteeism, quality, 360 performance ratings, and more. The net is that **when energy goes down, if no intervention is implemented, then individual and firm performance will go down in the near future**. Also, we discovered that leadership energy is a lead indicator of all employee energy because leader energy affects employee energy.

The data for July (see Figure 1 below) reveal that **across all industries, energy levels are at their lowest point in the past 23 months**. Moreover, 12% of the current sample is reporting in what we call the “danger” zones (either overly energized to the point of potential burnout or not energized); both conditions predict sub-optimal performance levels (See Table 2). Our research shows that energy is not something to be maximized but optimized. Thus, we use a proven method of using self-reported productivity levels to create what we call a productivity zone and ultimately report whether employees are in the “zone” of productivity<sup>4</sup>.

Figure 1. Energy Trend Data: Past 23 Months



<sup>4</sup> Zone status is calculated by using the answer to a separate question which asks respondents to rate the energy levels where they are most productive. The self report method has been found to predict performance outcomes. The process and metrics are trademarks of eePulse with a patent pending on the methods and technology.



Table 1. Energy Levels of Current Sample (N = 280)

Response Scale	Percent
8.76- 10.0 Overly energized	10%
6.26- 8.75 Very energized	43%
3.75- 6.25 Energized	29%
1.25- 3.74 Somewhat energized	17%
0.0 - 1.24 Not energized	2%

Table 1 shows the percentage of respondents in what we call the “danger zones.” As energy is an optimization construct (both too much and too little are problematic), it is important to identify the percent of the population reporting in the very high range (overly energized) and the very low range (not energized or somewhat energized). A total of 29% of the population is reporting at rates that are considered to be at risk.

Table 2: Industry Results for Energy Pulse

**ENERGY PULSE RESULTS**

Group	Pulse (SD) <sup>a</sup>	Change <sup>b,d</sup>	WPC (#) <sup>c</sup>	Zone	PLow	PHigh	Energy (%)			
							Low Energy (0.0 - 3.74)	Medium Energy (3.75 - 6.25)	High Energy (6.26 - 10.0)	
All Industries	6.04 (2.27)	↓ -0.58	-0.35 (121)	-0.88	6.92	7.99	19	29	52	
Agriculture	NA	NA	NA	NA			NA			
Biotechnology	7.12 (1.79)	↑ 0.15	-1.75 (2)	⬇	6.37	7.63	0	20	80	
Communications	5.69 (2.03)	↓ -0.88	-0.54 (5)	-1.78	7.47	8.08	13	50	38	
Construction	7.42 (1.56)	↓ -0.15	0.88 (4)	⬇	7.30	8.05	0	17	83	
Consulting	6.43 (2.09)	↓ -0.08	-0.34 (16)	-0.55	6.98	8.10	12	31	58	
Engineering	7.09 (2.68)	↑ 0.96	2.10 (7)	⬇	6.90	8.02	18	18	64	
Finance, Insurance, and Real Estate	5.09 (1.85)	↓ -1.43	-1.37 (11)	-1.96	7.05	7.95	29	41	29	
Government	6.67 (1.33)	↑ 0.37	0.63 (4)	⬇	6.31	7.69	0	17	83	
Health Care	4.43 (2.59)	↓ -1.97	-0.88 (4)	-2.08	6.51	7.95		57	14	29
Information Technology	5.50 (2.14)	↓ -1.08	-1.07 (14)	-1.50	7.00	8.01	20	36	44	
Manufacturing	6.35 (2.13)	↓ -0.41	-0.07 (24)	-0.65	7.00	8.13	17	19	64	
Mining	8.00 (0.00)	0.00	0.00 (1)	0.50	7.50	7.50	0	0	100	
Not-For-Profit Agency	6.57 (2.40)	↓ -0.42	-1.30 (10)	-0.46	7.03	8.04	14	29	57	
Other	5.88 (2.47)	↓ -2.12	-1.50 (3)	⬇	5.37	7.14	23	32	45	
Retail Trade	4.29 (1.76)	↓ -1.34	-0.42 (3)	-1.84	6.13	7.59	33	50	17	
Services (other than consulting)	4.97 (2.56)	↓ -1.61	0.74 (5)	-1.87	6.84	7.99	39	28	33	
Transportation and Public Utilities	7.00 (0.00)	↑ 0.46	-1.00 (1)	-0.33	7.33	7.68	0	0	100	
Web-based Technology	7.10 (1.52)	↓ -0.23	-0.60 (5)	-0.26	7.36	7.65	0	30	70	
Wholesale Trade	7.75 (1.26)	↑ 1.62	1.50 (2)	0.31	6.31	7.44	0	25	75	

<sup>a</sup>Average (Standard Deviation) | <sup>b</sup>Change from Previous Time Asked | <sup>c</sup>Change for Respondents Answering two periods in a row  
<sup>d</sup>Points above or below Productivity Zone | <sup>e</sup>Lower Productivity Boundary | <sup>f</sup>Upper Productivity Boundary  
<sup>g</sup>⬆ = 0 to 2.5%; ⬇ = 2.6 to 5%; ⬆ = 5.1%+;

Table 2 is a summary of energy by industry. The results indicate that as a whole, overall energy has decreased since the last Pulse Dialogue, and a total of 12 industries experienced a downward trend in energy. At the same time, 5 industries have energy scores showing an upward trend.

The first column includes a list of all the industries sampled. An NA indicates that there were no responses from that industry in this particular Pulse Dialogue. The second column heading, pulse, is the average energy score for each industry. SD is the standard deviation of energy. The smaller the SD, the more similar are the scores of the respondents from that industry. The third column shows overall change from the last time we ran the energy question. The associated arrow indicates whether the energy score has increased, decreased, or remained stable. The color of the arrow represents the amount of change (see description at bottom of the graph). The WPC column is “within person change” and calculated only for those people who responded to both Pulse Dialogues. This is an important number as our sample changes over time. When the WPC and overall change scores show a consistent directional change, confidence in the overall pattern of results increases. The fifth column, zone, represents the area in the energy distribution where leaders are most productive. Energy scores that fall within the upper and lower productively zone bounds are considered “in the zone” (research shows being in the zone positively predicts performance outcomes). Thumbs up is an indicator of being in the zone; blue and minus sign is below, and red and positive sign is above the productivity zones. The sixth and seventh columns represent the lower and upper bound of the productivity zone.

An examination of the “change” column (and WPC change column) shows energy scores in healthcare dropped nearly 2 points and are currently reporting energy levels below their productively zone. Those representing the information technology firms are also experiencing a downward trend on the energy metric and are 1.5 points below their productivity zone. An examination of the comment data increases our understanding of the causes for both the decreases and increases on the energy metric.

### ***Energy Comment Themes***

The comment data were reviewed by grouping industries into one of two categories. One category represented those industries where energy decreased; the other category represented those industries reporting an increase in energy. This is not to say that positive comments were absent from industries that report a decrease in energy, however, the rationale is that if the energy metric decreased in an industry, it would be informative to look for common themes to help explain the energy loss. Likewise, there are negative comments in industries that report an overall increase in energy, however, focusing on the common



themes in each category (i.e., energy increased or decreased) adds to our understanding of what drives an overall change.

### *De-energizing Themes*

The following list represents the most common de-energizing themes expressed through the open-ended comments. The list is rank-ordered and themes higher on the list contained more comments related to the theme than the themes lower on the list.

- Initiative overload and/or multiple initiatives lacking a priority hierarchy
- Dwindling resources coupled with increased demands
- Workload
- Lack of vision and/or direction from senior leadership
- Lack of trust in senior leadership
- Constant crisis and/or change
- Change without input

### *Energizing Themes*

The following list represents the most common energizing themes. As above, this list is rank-ordered and themes higher on the list contained more comments related to the theme than themes lower on the list.

- Appropriate resources to accomplish task/work/job
- Experiencing success, wins, meeting expectations
- Challenging and/or interesting work
- Positive feedback from managers and/or customers

### ***Sample Comments Describing Events That Decrease Energy***

#### Biotechnology

*“Doing the work of multiple people due to cutbacks, no time to properly plan, no time to reflect on actions taken.”*

#### Consulting

*“Right now, my energy is negatively impacted because the senior leadership team is new and a clear strategy has not been articulated. I think this is also impacting my peers.”*

## Healthcare

*“Uncertainty and change in the work environment are also affecting myself and other managers.”*

## Information Technology

*“Having to stop and start initiatives. Constantly changing directions. New leaders not clear on what is expected. Being pulled in too many directions to feel really at my best.”*

*“Our executive leadership team seems to believe that the appropriate thing to do is to give only negative feedback. Consequently, employees are generally demoralized and question whether or not putting in extra will receive any recognition.”*

## **Sample Comments That Describe Events That Increase Energy**

### Engineering

*“A new more effective management team is on board and funding for our projects looks likely.”*

### Government

*“Two key areas that energize us are (1) Appreciative customers - a form of feedback (2) challenging work.”*

### Wholesale

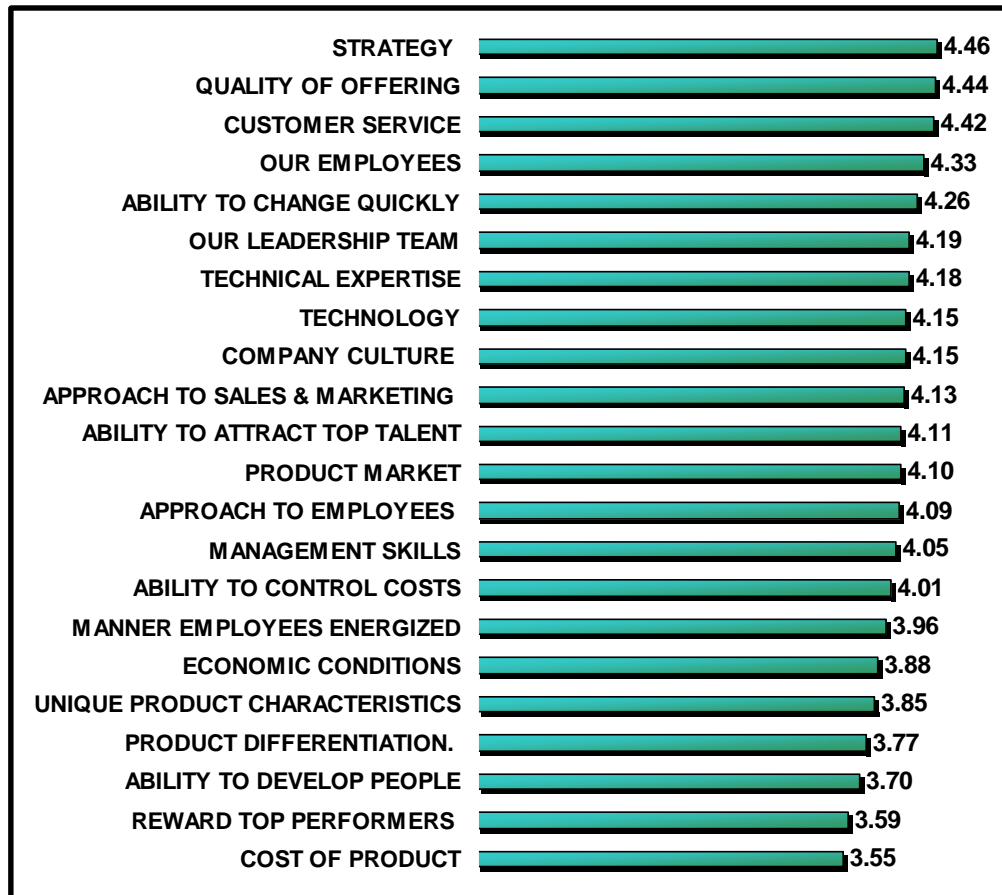
*“Exciting, intellectually stimulating new projects and a good team cooperative, collaborative interaction.”*

## **Business Capital**

The current Leadership Pulse Dialogue focused on leaders' perceptions of the importance of several components of business capital. The different types of business capital were identified through my earlier IPO studies. The original studies included more than 40 questions, and the current set of questions used in the Leadership Pulse is a shorter version based on deep analysis of the ongoing research.

Thus, in the July 2006 Pulse Dialogue, we asked leaders to rate the relative importance of the 22 components of business capital. Participants responded using a 5-point Likert-type scale anchored at each response point in the following manner; 1 = *Not Important at All*, 2 = *Not Very Important*, 3 = *Somewhat Important*, 4 = *Important* and 5 = *Very Important*. The results displayed in Figure 2 (below) represent the mean score of all respondents.

Figure 2. Rank Ordered Mean Scores of 22 Components of Business Capital



While Table 2 provides valuable information on the relative importance of different forms of business capital for all industries, one observation is that the higher rated items seem to focus on larger scale or bigger picture components of capital such as strategy, quality of offering, etc. The lower rated items are more tactical issues, such as cost, how employees are rewarded, and development. To better understand the rankings, a factor analysis was conducted to determine which of these individual items could be grouped together.

**Grouping Individual Component Items into Related Categories**

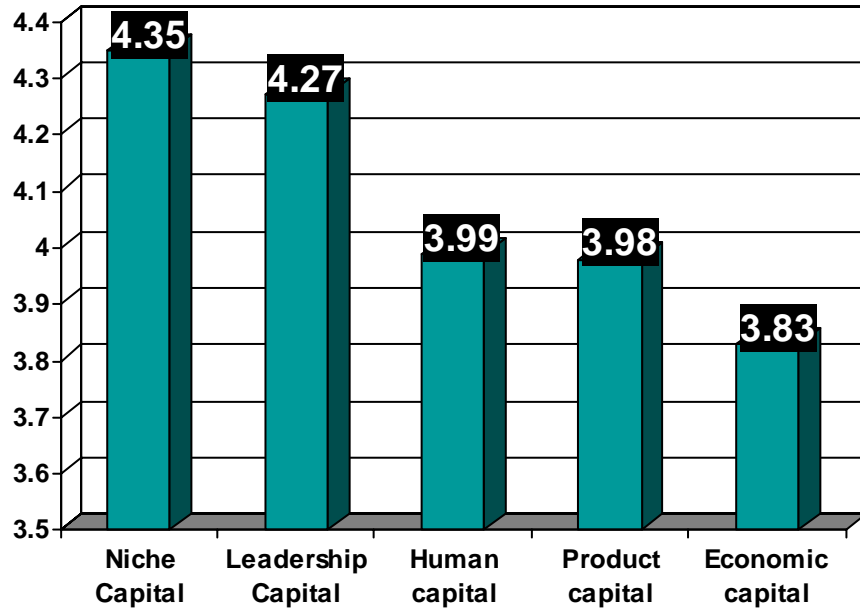
Applying factor analysis, we found that the 22 components of business capital resulted in five overall factors. The following reflects the overall factor structure:

Table 3: Grouped Components of Business Capital

<b>Question</b>	<b>Type of capital</b>
Our employees	Human
Company's approach to employees	Human
Our ability to develop people	Human
Overall culture of the company	Human
The way employees are energized at work	Human
The way we reward top performers	Human
Our ability to attract top talent	Human
Management skills in the company	Human
Unique product characteristics	Product
Product differentiation	Product
Our company's technology	Product
Product market	Product
Our technical expertise	Product
Cost of the product	Economic
Our ability to control costs	Economic
General economic conditions	Economic
Our company's strategy	Leadership
Our approach to sales and marketing	Leadership
Our leadership team	Leadership
Our level of customer service	Niche
The quality of our offering	Niche
Our ability to be flexible and change quickly	Niche

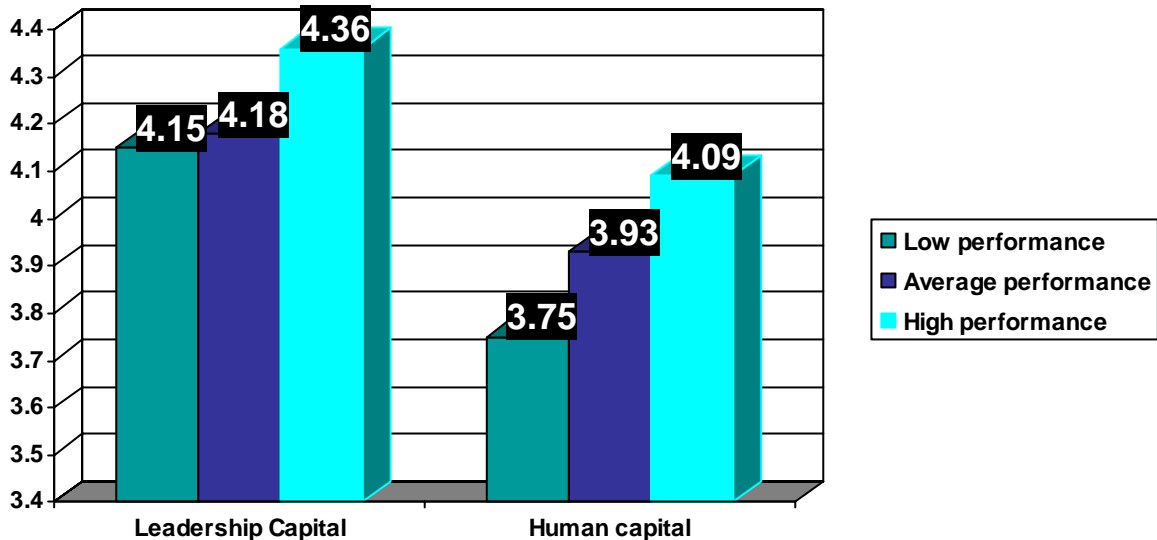
Overall factor scores were created by combining the questions that represent each type of capital, and the graph below represents the overall mean or average scores for each. As can be seen in the graph, the #1 rated component of business capital is niche capital, and the lowest rating score is for economic capital.

Figure 2: Overall Mean Scores for each Overall Type of Business Capital



Next, we used the overall factor scores (scores on the 5 business capital higher-order components) to determine which of these resources provided competitive advantage. Our source data in answering this question was the participant self-reported firm performance data. We ran an analysis of variance (ANOVA) to determine which components of capital were significantly different by performance levels. The results indicated that only two of the five types of capital were statistically significant when comparing the data by firm performance. Those two variables were human and leadership capital. Below is a graph indicating the pattern of results:

Figure 3: Mean Scores on Leadership and Human Capital by Firm Performance



Although human and leadership capital did not emerge as the most important components of business capital from a pure ranking analysis, they seem to be the only two factors that differentiate low from high performers. In fact, a more in-depth analysis using regression analysis (predicting firm performance in the equation) yielded results indicating that **human capital alone was the only statistically significant predictor** of overall performance (when all five business component factors are included in one overall regression equation with additional control variables for firm size).

Other patterns that emerged from additional industry specific ANOVA analyses follow<sup>5</sup>:

- Service businesses place more value in economic capital than do other industries.
- Manufacturing industries place most value on product capital.
- Smaller firms place more value on niche capital than do larger organizations.
- C-level respondents place more value on niche capital than do participants in other positions.

In order to further explore the relative impact of human capital on performance, we ran the regression analyses for several industry sectors. The results revealed industry differences in terms of which resources were most important for performance within the industry. Examples follow:

- In manufacturing and science / IT businesses, **human capital alone** was the significant predictor of performance.
- In professional services businesses, **leadership and niche capital** were key to success.
- In services businesses (not consulting), **product capital** was the most important differentiating factor.
- Lastly, within government, we found that **leadership capital** alone was the statistically significant differentiator.

The different patterns of results indicate that industry can be a key factor in understanding which component of business capital has the highest value in driving long-term competitive advantage. What's interesting about all of the

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<sup>5</sup> See Appendix B for additional detail on the industry differences for each individual question.

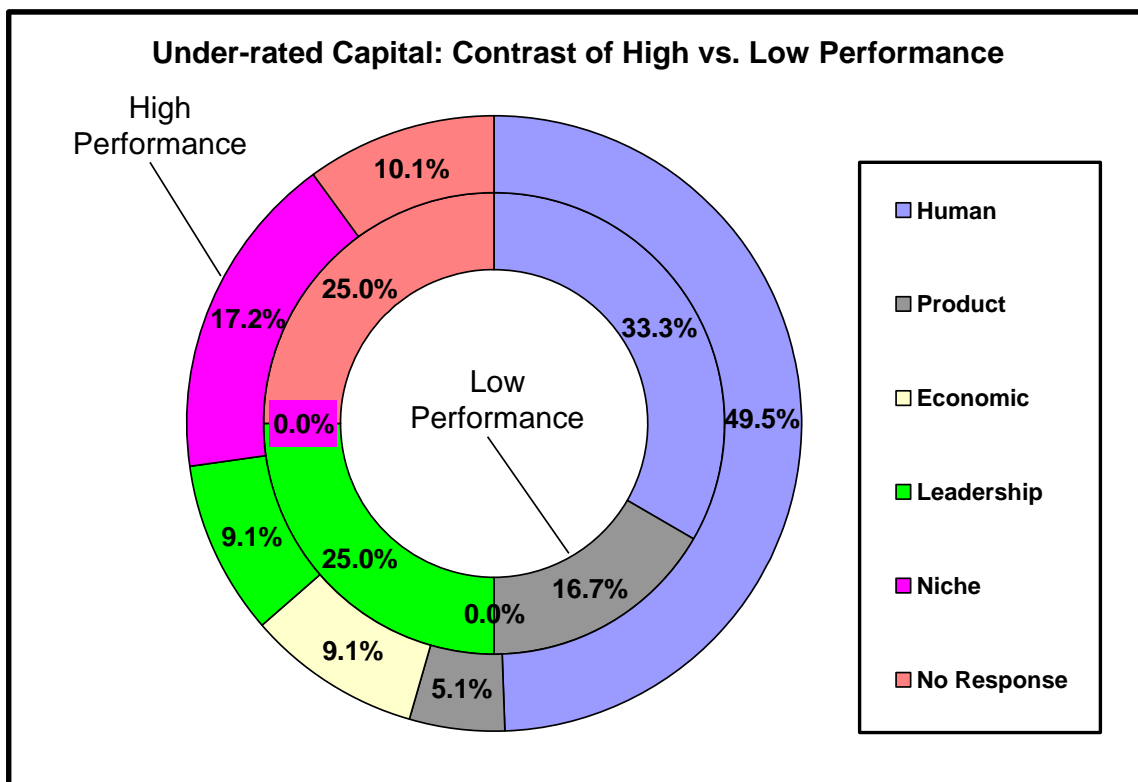


results is that in no industry do we see economic capital emerge as the key differentiator, although in many cases, lowering costs tends to be the first reaction to any threat to a business' performance.

**Most Under-Rated Component of Business Capital**

The last question we asked respondents focused on the resource which they thought was most under-rated. We asked this question in an open-ended comment format, and in addition to naming the resource they explained their answers. The overall responses were content analyzed, and then the data was reviewed by examining the pattern of results for the low vs. high performance firms.

***Performance Level by Underrated Capital Choice***



The figure above represents high (outside circle) and low (inside circle) performing firms. The percentages reflect the number of times respondents commented on one of the five components of capital as under-rated. As the figure indicates, human capital was identified as under-rated by 33% of the respondents from the low performance firm category, while 49.5% from the high performance category identified components of human capital factor as under-rated.

As indicated above, we can review the comment data to better understand certain quantitative results. Below we present comment data examples by reported firm performance. That is, we grouped the comment data by low, average and high performance and provide examples from each performance level to the question, *Which business driver do you think is most under-rated in terms of importance to growth and success?*

#### Low Performance Firm Example

*"I believe the role of management skills is underrated. When you look at the factors listed, the quality of management impacts every facet. Managers make the decisions, secure resources, and guide the values and cultural norms."*

*"The approach to employees - it is obvious that good people are leaving because of management."*

#### Average Performance Firm Example

*"The ability to develop people in the company is going to be key as we will be losing 40-50% of our employees to retirement in the next 10 years. We need to do a better job formally developing people and communicating expectations to these people."*

*"The leadership team comes to mind quickly because in the last two years, we have seen changes in this area make a huge difference in the attitudes and performance of manufacturing employees and supervisory/manager levels."*

#### High Performance Firm Example

*"Our Ability to develop people. Successful growth cannot occur without preparing employees to take on new opportunities and/or to fill positions that have been created by the promotion of their manager."*

*"Rewarding top performers - It is an indicator the manager is someone who cares and is more likely a great boss. It makes a difference in top talent retention."*

As the comment data indicate, regardless of the performance level there is a consistent pattern that emerges. The pattern suggests that across all performance levels there is a belief that human capital is under-rated. However, the pattern clearly supports the idea that as performance increases, so to does the amount of comment data reflecting this concern. Thus, the highest performing firms made human capital related comments more often than did any other performance level group.

## Conclusion

I have been studying this data for some time now, and as I write the conclusion I just came back from two days from visiting with one of my clients in San Francisco, California. They are a fast-growth company, on the road to high success with extremely brilliant people who want to contribute to the success of their organization. We have been working with them for six months, collecting energy data inside their organization, reading thoughtful comments, organizing information, and then distilling all that data to the senior executive team and the CEO.

In reflection, here's where I land – success is not only about human capital. That much the data has right. Humans alone are not the key asset. The quest to measure and tap into human capital alone will lead us down blind alleys.

Here's what I think really matters – relationships! It is the quality of the relationship, or relational capital that is the “secret sauce” or the magic. Unfortunately, we did not measure relational capital in this study. However, think about the interaction between management and employees; the “interaction” is about the relationship.

Certain people create positive energy around them; they influence people, they drive others to succeed. The “thing” that influences others is not their brilliance, their importance, or their looks. The magic is the quality of the relationship they build with peers, customers, vendors, friends (who may one day be customers), and more. The relational capital you have in your company will create long-term competitive advantage.

Let's think about that a moment. What if you analyzed the way you do business with a relationship capital lens? Is the every day way in which you interact with employees (in the hallway, on the elevator, in meetings, in public, when you hire them, how their efforts are recognized, etc.) improving or harming your personal relationship capital? What about your customer service team? How do they treat customers? Are they “wowing” the customer or delighting them? Or are they processing them in a minimal way that reduces the value of your relationship? Do your employees answer the phone, or do you have an answering service? Do you answer customer complaints with courtesy? Do you treat people as if taking care of their particular need is central to your own firm's success?

It does not matter if you have great and smart people, and I speculate it does not matter what you DO with them. What really matters – to create long-term competitive advantage and true capital – may just be your ability to develop

strong and positive relationships among all the stakeholders with whom they work and interact.

Now – here comes the interesting part for any CEO. People do not walk out the door alone when they leave; their relationships go with them. If you have people who are great at relationship management, you want to keep them. If they are poor at this, they should go away, and sooner is better than later. It also says it is our job as leaders to teach people how to capitalize on their relationships. You don't learn it in a class. The best approach I have seen to date is one-on-one. I would move the executive coaching field to really focus on relationship management. Measure the quality of relationships, the staying power of relationships and then help leaders manage it.

I'm going to give this idea some time to percolate, and I'm going to test it out with clients and colleagues. However, in future leadership pulse studies you will see more questions about human capital because I want to test out a few theories with you.

Thank you for your participation; there is much more to come.

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If you are interested in being part of the ongoing efforts to help leaders bring added value to their organizations please contact Dr. Welbourne at [theresa@eepulse.com](mailto:theresa@eepulse.com).

If you are currently not part of the Leadership Pulse study group, and you wish to participate (or sign up leaders within your organization), you can register at <http://www.umbs.leadership.eepulse.com>.

**Appendix A: Sample Characteristics and Individual Item Analysis**

Company Size	Percent of total
	%
Less than 100 employees	38.3
101 to 500 employees	14.1
501 to 5,000 employees	12.9
5,001 to 25,000 employees	5.9
25,001 and over	8.6
Not supplied	20.3
Total	100.0
Job Level	Percent of total
	%
C-core job (CEO, CFO, CIO, CAO, etc.)	30.5
VP level job (VP of any functional area)	15.2
Director level job	16.4
Senior manager level job	3.9
Manager level job	5.1
Professional in non-management position	6.6
External consultant	2.0
Total	79.7
Not supplied	20.3
Grand Total	100.0
Industry	Percent of total
	%
Production	21.9
Science_IT	20.3
Professional Services	20.7
Services_Wholesale/Retail	14.1
Govt_Not-for-profit	10.5
Total	87.5
Not supplied	12.5
Grand Total	100.0
Functional Area	Percent of total
	%
Management	52.3
Technical_R&D	8.6
Sales_Marketing	14.8
Manufacturing_Other	11.7
Total	87.5
Not supplied	12.5
Grand Total	100.0

### Supplementary Analysis of the Importance of Individual Components of Business Capital

Industry Sector Sample										
Business Driver	All	Biotech	Consult.	Eng.	Fin, Ins & Real Estate	IT	Man.	Not-for-profit	Services (not consult.)	Web-based Tech.
Our company's strategy.	4.46	4.60	4.38	4.00	4.81	4.48	4.53	4.43	4.33	4.67
The quality of our offering.	4.44	4.40	4.61	4.20	4.50	4.41	4.38	4.54	4.31	4.67
Our level of customer service.	4.42	4.00	4.73	3.80	4.63	4.48	4.45	4.61	4.22	4.33
Our employees.	4.33	4.80	4.36	3.90	4.27	4.19	4.16	4.57	4.28	4.67
Our ability to be flexible and change quickly.	4.26	3.80	4.27	3.90	4.20	4.32	4.42	4.21	4.17	4.44
Our leadership team.	4.19	3.80	4.23	4.00	4.50	4.13	4.06	4.07	4.28	4.33
Our technical expertise.	4.18	5.00	4.19	4.60	4.06	4.43	4.18	3.85	3.67	4.55
Our company's technology.	4.15	4.80	3.85	4.30	4.12	4.41	4.24	3.78	3.94	4.55
Overall culture of the company.	4.15	4.20	4.27	3.89	4.12	4.04	4.16	4.50	4.00	3.87
Our approach to sales and marketing.	4.13	3.67	4.08	3.90	4.47	4.32	4.08	3.22	4.22	4.00
Our ability to attract top talent.	4.11	4.20	4.19	3.80	4.13	4.26	3.89	4.43	3.78	4.44
Product market.	4.1	4.40	3.84	3.78	4.43	4.09	4.23	3.60	3.87	4.22
Company's approach to employees.	4.09	4.60	3.96	3.89	4.00	3.86	4.15	4.36	4.11	3.88
Management skills in the company.	4.05	4.00	4.08	4.11	4.12	4.09	3.94	4.15	4.11	4.11
Our ability to control costs.	4.01	3.80	3.58	3.10	4.47	3.82	4.12	4.15	4.33	3.78
The way employees are energized at work.	3.96	3.60	4.30	3.70	3.94	3.78	3.81	4.00	3.94	4.11
General economic conditions.	3.88	3.60	3.69	3.80	4.19	3.82	3.84	3.93	4.17	3.78
Unique product characteristics.	3.85	4.40	3.72	3.88	3.54	4.16	4.06	3.90	3.53	4.11
Product differentiation.	3.77	4.20	3.80	3.30	3.50	3.95	3.81	3.90	3.44	4.11
Our ability to develop people.	3.70	3.40	3.64	3.44	3.87	3.54	3.73	4.00	3.61	3.55
The way we reward top performers.	3.59	3.60	3.69	3.33	3.60	3.68	3.57	3.43	3.72	3.22
Cost of the product.	3.55	3.20	2.96	3.20	3.46	3.83	3.89	3.10	3.83	3.75

Notes: Biotech = Biotechnology sector, Consult. = Consulting sector, Eng. = Engineering sector, Fin, Ins, & Real Estate = Financial, Insurance & Real Estate sector, IT = Information Technology sector, Man. = Manufacturing sector, Not-for-profit = Not-for-profit, Government, and Utilities, Services (not consult.) = Professional services that do not include consulting.

Legend: **Green equals top three components. Red equals bottom three components.** Tie scores increase the number of top (bottom) components of capital beyond three. The "All" column represents the average score across all industries.



## Supplementary Analysis of the Importance of Individual Components of Business Capital

Industry Sector Sample										
Business Driver	All	Biotech	Consult.	Eng.	Fin, Ins, & Real Estate	IT	Man.	Not-for-profit	Services (not consult.)	Web-based Tech.
Our company's strategy.	4.46	4.60	4.38	4.00	4.81	4.48	4.53	4.43	4.33	4.67
The quality of our offering.	4.44	4.40	4.61	4.20	4.50	4.41	4.38	4.54	4.31	4.67
Our level of customer service.	4.42	4.00	4.73	3.80	4.63	4.48	4.45	4.61	4.22	4.33
Our employees.	4.33	4.80	4.36	3.90	4.27	4.19	4.16	4.57	4.28	4.67
Our ability to be flexible and change quickly.	4.26	3.80	4.27	3.90	4.20	4.32	4.42	4.21	4.17	4.44
Our leadership team.	4.19	3.80	4.23	4.00	4.50	4.13	4.06	4.07	4.28	4.33
Our technical expertise.	4.18	5.00	4.19	4.60	4.06	4.43	4.18	3.85	3.67	4.55
Our company's technology.	4.15	4.80	3.85	4.30	4.12	4.41	4.24	3.78	3.94	4.55
Overall culture of the company.	4.15	4.20	4.27	3.89	4.12	4.04	4.16	4.50	4.00	3.87
Our approach to sales and marketing.	4.13	3.67	4.08	3.90	4.47	4.32	4.08	3.22	4.22	4.00
Our ability to attract top talent.	4.11	4.20	4.19	3.80	4.13	4.26	3.89	4.43	3.78	4.44
Product market.	4.1	4.40	3.84	3.78	4.43	4.09	4.23	3.60	3.87	4.22
Company's approach to employees.	4.09	4.60	3.96	3.89	4.00	3.86	4.15	4.36	4.11	3.88
Management skills in the company.	4.05	4.00	4.08	4.11	4.12	4.09	3.94	4.15	4.11	4.11
Our ability to control costs.	4.01	3.80	3.58	3.10	4.47	3.82	4.12	4.15	4.33	3.78
The way employees are energized at work.	3.96	3.60	4.30	3.70	3.94	3.78	3.81	4.00	3.94	4.11
General economic conditions.	3.88	3.60	3.69	3.80	4.19	3.82	3.84	3.93	4.17	3.78
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Our ability to develop people.	3.70	3.40	3.64	3.44	3.87	3.54	3.73	4.00	3.61	3.55
The way we reward top performers.	3.59	3.60	3.69	3.33	3.60	3.68	3.57	3.43	3.72	3.22
Cost of the product.	3.55	3.20	2.96	3.20	3.46	3.83	3.89	3.10	3.83	3.75

Notes: Biotech = Biotechnology sector, Consult. = Consulting sector, Eng. = Engineering sector, Fin, Ins, & Real Estate = Financial, Insurance & Real Estate sector, IT = Information Technology sector, Man. = Manufacturing sector, Not-for-profit = Not-for-profit, Government, and Utilities, Services (not consult.) = Professional services that do not include consulting. Legend: Read from left to right.

**Green equals the highest score on the particular item; red equals the lowest score on the particular item in the first column.** Second column (all) is the average rating for the component of business capital across all industries).

**Supplementary Analysis of the Importance of Individual Components of Business Capital**

Business Driver	Industry Sector Sample									
	All	Biotech	Consult.	Eng.	Fin, Ins, & Real Estate	IT	Man.	Not-for-profit	Services (not consult.)	Web-based Tech.
Our company's strategy.	4.46	↑	↓	↓	↑	↑	↑	↓	↓	↑
The quality of our offering.	4.44	↓	↑	↓	↑	↓	↓	↑	↓	↑
Our level of customer service.	4.42	↓	↑	↓	↑	↑	↑	↑	↑	↑
Our employees.	4.33	↑	↑	↓	↓	↓	↓	↑	↓	↑
Our ability to be flexible and change quickly.	4.26	↓	↑	↓	↓	↑	↑	↓	↓	↓
Our leadership team.	4.19	↓	↑	↓	↑	↓	↓	↓	↑	↑
Our technical expertise.	4.18	↑	↑	↑	↓	↑	↓	↓	↓	↑
Our company's technology.	4.15	↑	↓	↑	↓	↑	↑	↓	↓	↑
Overall culture of the company.	4.15	↑	↑	↓	↓	↓	↑	↑	↓	↓
Our approach to sales and marketing.	4.13	↓	↓	↓	↑	↑	↓	↓	↓	↓
Our ability to attract top talent.	4.11	↑	↑	↓	↑	↑	↓	↑	↓	↑
Product market.	4.1	↑	↑	↓	↑	↓	↑	↓	↓	↓
Company's approach to employees.	4.09	↓	↑	↓	↓	↓	↑	↑	↑	↑
Management skills in the company.	4.05	↓	↑	↑	↑	↑	↓	↑	↑	↑
Our ability to control costs.	4.01	↓	↓	↓	↑	↓	↑	↑	↑	↓
The way employees are energized at work.	3.96	↓	↑	↓	↓	↑	↓	↑	↓	↑
General economic conditions.	3.88	↓	↓	↓	↓	↓	↓	↑	↑	↓
Unique product characteristics.	3.85	↑	↓	↑	↓	↑	↑	↑	↓	↑
Product differentiation.	3.77	↑	↑	↓	↓	↑	↑	↑	↓	↑
Our ability to develop people.	3.70	↓	↑	↓	↑	↓	↑	↑	↓	↓
The way we reward top performers.	3.59	↑	↑	↓	↑	↑	↓	↓	↑	↓
Cost of the product.	3.55	↓	↓	↓	↓	↑	↑	↓	↑	↑

Notes: Biotech = Biotechnology sector, Consult. = Consulting sector, Eng. = Engineering sector, Fin, Ins, & Real Estate = Financial, Insurance & Real Estate sector, IT = Information Technology sector, Man. = Manufacturing sector, Not-for-profit = Not-for-profit, Government, and Utilities, Services (not consult.) = Professional services that do not include consulting.

Legend: figure read top-to-bottom, by column. **Green arrows indicate a score higher than the overall average rating of the particular item. Red arrows indicate a score lower than the overall average rating for the particular item.**