CHARACTERISTICS OF SUCCESSFUL TECHNOLOGY CEO\textregistered s

Predictors of CEO Success
Introduction

This Vell research report on Characteristics of Successful CEOs investigates whether common perceptions regarding the predictors of CEO success are valid. The research uses data about public technology products companies in New England with over $100 M in revenues — and their CEOs.

Our research examines the correlation (or lack of) between a company’s performance and the CEO’s education, experience, tenure, age, reliance on an independent Chair, and whether the CEO came in as internal promotion vs. external hire.

Not unexpectedly, technology companies differ from other companies in many significant ways. Although we work extensively with technology CEOs, some of the findings were surprising to us. For example, the predominance of founders among companies with revenues between $100 M - $1 B was unexpected.

Each topic has three sections. The “Patterns Detected” section summarizes the underlying distribution of our data set, e.g., the percent of CEOs who were founders by company size. The “So Where Were the Differences” section reports the correlation between corporate performance and the relevant characteristics, e.g., founders vs. non-founders. The “Key Take-Aways” section highlights the most striking conclusions.

We hope that you find this study both informative and insightful. If you would like to discuss any aspect of this study further, please contact us at info@vell.com. Your input will help fuel investments in future research we publish.

Best Regards,

Dora Vell
CEO
Topic One: Education

Patterns Detected

CEOs are highly educated

- 68% have advanced degrees
- 43% of CEOs with advanced degrees have MBAs (33% of all CEOs have MBAs)
- 21% of all CEOs have PhDs

CEOs in larger companies differ from those in smaller companies as follows:

- Larger company CEOs are more likely to have an advanced degree (88% vs. 64% for companies between $100 M and $1 B)
- A larger portion of big company CEOs with advanced degrees have MBAs (55% vs. 24% for companies between $100 M and $1 B)
CEOs with technical degrees predominate (59% of all CEOs in our study) and these are more likely to have advanced degrees.

CEOs with Ivy League degrees were in the minority (40%) but over-represented - not a surprise given the preponderance of Ivy Leaguers in New England.

- They are less likely to have technical backgrounds (33% vs. 68% for non-Ivy League CEOs)

**SO WHERE WERE THE DIFFERENCES?**

Not surprisingly, growth rates were lower at larger companies (61% vs. 93% median 3-year growth rates)
MBAs outperform non-MBAs at companies under $1 B in revenue (159% vs. 89% median 5-year growth rates)

For companies over $1 B in revenue, the results were much closer, 61% for CEOs with MBAs vs. 70% for CEOs without MBAs.

The companies with CEOs holding technical degrees outperformed companies with CEOs who didn’t (99% and 101% vs. 71% median 5-year growth rates)

Even though the median 5-year growth rate was close for technical CEOs whether they had a BS or higher degree, the maximum growth rate CEOs with just a BS degree was over 8000% – a company that grew from $3.6 M to $306 M in 3 years. This outlier underscores the value of identifying and taking advantage of technology trends, which often requires a technical background.
In companies over $1 B in revenue, the technical degree premium was even more striking (99% vs. 47% for companies whose CEOs had non-technical degrees).

Companies whose CEOs have Ivy-League degrees significantly outperformed companies of CEOs without (287% vs. 86%).
KEY TAKEAWAYS

MBA degrees are correlated with stronger growth, but only in companies between $100 M and $1 B. Moreover, the strongest growth of any of the smaller companies was by a non-MBA CEO. An MBA is a useful early indicator of business savvy - and perhaps drive, but as executives build their experience, results should be a larger factor in selecting candidates than whether they have an MBA or not.

Some search committee members favor CEO candidates with strong business backgrounds, which often blind them to excellent candidates with valuable technical backgrounds. Our experience is that technical degrees often correlate with high intelligence levels and also that CEO comfort with technical details helps address strategic issues such as where the market is headed and where the best opportunities are to be found.

An Ivy League degree is an asset to performance. Perhaps the admissions process in these programs is a great filter for work ethic and smarts. Search committees tend to be biased either for or against Ivy League degrees. This data shows that an Ivy League degree is positively correlated to performance.

Topic Two: Experience
CEOs / General Manager Experience

PATTERNS DETECTED

Only 29% of companies have a current CEO with prior CEO experience.

- CEOs at companies with revenue below $1 B were slightly more likely to have prior CEO experience, but still only 31% did so.
- 34% of CEOs at companies between $100 M - $1 B in revenue had neither prior CEO or any GM experience. Most of these CEOs were founders (70% of 34% or 25% of all CEOs).
- In companies with revenues over $1 B, 78% had GM prior experience only and 22% had CEO and GM experience.
Inversely, 72% of CEOs had General Manager experience, either at current or prior companies.

- All CEOs at companies with revenue over $1 B had GM experience.
- However, in most cases, CEOs were experienced as GMs at other companies.
- In companies with revenue over $1 B, CEOs typically have to prove their talent as GM in the current company: 56% of these CEOs had been GMs at their current company.
- Only 11% of CEOs had GM experience at both their current and prior companies.

**SO WHERE WERE THE DIFFERENCES?**

Prior CEO experience correlates to higher median 3-year growth rates.
However, the advantage is more pronounced at large companies.

Perhaps because they rarely bring in outside CEOs - only 1 in 5 large company CEOs had prior CEO experience - and when they do, the vetting process brings in best-in class-CEOs.

At companies between $100 M - $1 B - where 70% of CEOs are founders - CEOs with prior CEO experience outperform their peers, but by a smaller edge.
General Manager (GM) experience initially appears to be detrimental to median 3-year growth rates.

This can be partially explained because CEOs at companies with over $1 B in revenue are over-represented in the GM experience class - recall they all had GM experience - and their growth rates are slower than smaller companies.

In companies with revenues over $1 B, GM experience at the current company correlates with a significant edge for median 3-year growth rates.
As you might expect in these large companies, CEOs with GM experience at a prior company have significantly lower performance than those promoted from within. Especially in larger companies, a successful track record with the company's technology, market, competitors, and culture might be a more significant predictor of success as CEO. This emphasizes the importance of having a solid succession and development plan in larger companies.

In addition to a solid succession plan, companies could benefit greatly from a talent management program, where the talent in their specific industry is tracked and nurtured over years. Potential successors are courted over years and relationships developed with key players and up and comers in the industry so that when they are needed they can be easily approached.

In companies with revenues between $100 M and $1 B, the highest median 3-year growth rate was associated with CEOs who lacked GM experience – 73% of these being company founders.

Among the CEOs with GM experience in smaller companies the result is the inverse of that found in larger companies: experience as GM in a prior company correlates to higher median 3-year growth rates than GM experience in the current company or both.

**KEY TAKE-AWAYS**

Prior CEO experience is more important to companies with revenue over $1 B.

In smaller companies, a very small percentage of CEOs have prior CEO experience.

GM experience is not a predictor of strong corporate revenue growth.

In larger companies, all CEOs have some GM experience. In this class of companies, experience as a GM in the current company is strongly correlated to higher performance, underscoring the importance of familiarity with the company's challenges and options.

In companies with revenues between $100 M - $1 B, CEOs without GM experience - most of whom are founders - are the top performers. Companies with revenues between $100 M - $1 B are more likely to look at outside candidates with prior CEO than prior GM experience.
Strategy Role

PATTERNS DETECTED

Only 15% of CEOs in our study had held a Strategy role. All of these were in companies with revenues between $100 M - $1 B.

SO WHERE WERE THE DIFFERENCES?

Median 3-year growth rate was higher for those CEOs with Strategy backgrounds.

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While the median 3-year growth rate was higher for those CEOs with Strategy backgrounds, this may be partly due to the fact that they are in smaller companies, which typically experience higher growth rates.

KEY TAKE-AWAYS

Both strategy and operational skills need to be present when selecting a CEO. Executives with strategy backgrounds can make a significant impact as CEOs if they are also skilled in operations, but this combination of talents is rare.

Succession planning committees thinking about future CEO candidates should be assessing executives with strategy backgrounds for operational potential - and where merited - giving them opportunities to develop and hone their operational skills through a series of progressive and meaningful roles.
Consulting Role

PATTERNS DETECTED

Only 8% of CEOs in our study had worked previously as consultants. All of these were in companies with revenues between $100 M – $1 B. Given that the companies in our study were product vendors, it is not surprising that only a small subset had a consulting background.

SO WHERE WERE THE DIFFERENCES?

Consulting experience correlates with higher median 3-year growth.

As with strategy backgrounds, consulting experience correlates with higher median 3-year growth rates, but these folks are in a minority (8%) and found only in companies with revenues between $100 M – $1 B.

KEY TAKEAWAYS

Executives with consulting backgrounds can make a significant impact as CEOs and should be considered but only if they also understand the product side and can operate a business.

Succession planning committees thinking about future CEO candidates should give executives with consulting backgrounds opportunities to demonstrate their operational abilities.
Engineering Role

Patterns Detected

29% of CEOs had held engineering roles, with almost all of these (91%) in companies with revenues between $100M – $1 B. In this smaller company set, they constitute 39% of CEOs. Only 11% of CEOs in companies with revenues over $1 B had engineering experience.

So Where Were the Differences?

Median 3-year growth rate was higher for those CEOs with prior engineering functional roles.

Again, while the median 3-year growth rate was higher for those CEOs who had held engineering functional roles, this may be partly influenced by the fact that most (91%) of these CEOs are in smaller companies, which typically experience higher growth rates. Even in the smaller companies, however, CEOs with engineering experience correlate with superior median 3-year growth rates.

Because the maximum, minimum, and median numbers are the same for all companies as for companies in the $100 M – $1 B range, we only show the latter, more relevant, chart.

Key Take-Aways

We recommend that while candidates with business backgrounds need to be considered, a good grounding as an engineering executive should be considered a positive indicator of success. When paired with strong business acumen, experience in engineering can broaden a CEO’s perspectives on the potentials of the technology and help with the strategic orientation and nimble repositioning of the company based on changes in market and competitive conditions.

Some search committees do value the engineering functional experience as a real asset, because deep understanding of the technology fundamentals, paired with a good business mind is a decidedly strong indicator for performance.
Sales & Marketing Roles

**Patterns Detected**

Most CEOs (66%) did not come from a Sales & Marketing background.

This was consistent across the different company sizes. Of those with sales or marketing backgrounds, roughly half were likely to have a combined sales and marketing background. 80% of the CEOs with combined sales and marketing experience were in the smaller companies.

**So Where Were The Differences?**

The top performers were CEOs with marketing rather than sales backgrounds.
Executives with sales experience and executives with marketing experience outperformed executives with neither.

Interestingly, all companies whose CEOs had both sales & marketing backgrounds performed the worst. When sales and marketing are combined, the tendency has been to give the role to a strong sales executive, who focuses on field marketing as opposed to strategy and product management / marketing.

**KEY TAKE-AWAYS**

Many technology company search committees focus heavily on sales backgrounds. Marketing backgrounds tend to be considered less frequently, especially in the B2B sector. It may be that marketing positively correlates to performance only when the executive has had strategic marketing experience. Understanding how to focus the company and targeting it to the right buyers may be more valuable than tactical sales execution. Clearly, both marketing strategy and sales execution are required for the functioning of a company, but the question here is who is at the helm and what bias they bring to the thinking of its strategy.

**Finance**

**PATTERNS DETECTED**

16% of CEOs in our study had experience in finance, with the majority (83%) of these CEOs in companies with revenues between $100 M - $1 B. CEOs with finance experience constitute 11% of CEOs at companies with revenues greater than $1 B and 17% of CEOs at companies with revenues between $100 M - $1 B.

**SO WHERE WERE THE DIFFERENCES?**

In companies with revenues between $100M - $1 B. CEOs without finance experience produced significantly higher 3-year growth rates.
CEOs without finance experience produced significantly higher median 3-year growth rates than CEOs with finance backgrounds in companies with revenues between $100 M - $1 B. However, the highest performing CEO had a finance background, so there are exceptions to the rule.

**KEY TAKE-AWAYS**

Financial acumen, including a clear understanding of performance measurements, is a vital requirement for an executive, especially in this era of higher regulation. Financial executives tend to be well prepared for the top role because they have access to the boardroom at very early stages in their careers.

Perhaps the correlation between prior finance roles and lower corporate growth rates is because financial executives tend to be selected in turnaround or financial re-engineering situations that have measures of success other than revenue growth.

**Venture Capital or Private Equity**

**PATTERNS DETECTED**

Only 8% of CEOs had venture capital or private equity experience and most of these were in smaller companies.

**SO WHERE WERE THE DIFFERENCES?**

As with strategy backgrounds, VC and investment experience correlates with higher median 3-year growth rates, but these executives are in a minority (8%) and found mainly in companies with revenues between $100 M - $1 B.

![Company Performance by CEO Experience](image)

**KEY TAKE-AWAYS**

Venture Capital and Private Equity often attract the best and brightest. In our sample, the performance by CEOs with experience in VC or private equity firms was superior to their peers. As with consulting or strategy backgrounds, when VC or private equity experience is paired with operational capability, it can become a very potent background for a CEO.
Topic Three: Internal vs. External Hire

**Patterns Detected**

39% of all CEOs were founders. However, all the founders were in companies with revenue between $100 M – $1 B.

- Founders constitute 52% of CEOs in companies between $100M – $1B.
- 14% of these founder-CEOs were co-founders who were promoted into the CEO slot.
- 37% of all CEOs were internally promoted, including 67% of CEOs at companies with revenue > $1 B.
- 24% of CEOs were recruited externally.
**SO WHERE WERE THE DIFFERENCES?**

Founders turned in the best revenue growth rates, partially because they are all in smaller companies.

Founders and externally hired CEOs both had an edge over internally promoted CEOs in terms of 3-year median growth rates.

The performance difference between external hires and internally promoted executives is significantly greater (3x greater) for companies with revenues > $1 B than for companies with revenues between $100 M – $1 B.
In companies with revenue between $100M - $1B, founders outperform all other CEOs, but they have only a slight edge over external hires.

Founders who can scale in management skills as the company grows are able to apply their in-depth knowledge and passion to drive higher growth rates.

**KEY TAKE-AWAYS**

Entrepreneurial founders are passionate and intimately knowledgeable about the products and markets they serve. There are many founders that have the ability to scale their skills as the company grows and deliver superior performance in companies up to $1B in revenue.

It was surprising that external hires outperformed internal hires even in larger companies, where you’d expect greater bench strength.

In spite of this, 75% of CEOs in the larger companies were internal promotions.

There may be a bias to bet on the ones you know intimately when internal and external candidates are each a close fit for the CEO role. Conversely the bar for external candidates may be slightly higher.

Companies with a strong succession planning process give internal candidates opportunities to develop their skills and vie for the CEO slot. But these companies go with outside candidates when the external candidates are clearly a better fit than anyone in the internal pool. Even when they select an external CEO, the internal talent pool is typically strengthened as a result.
Topic Four: Age

Patterns Detected

Smaller companies have a higher percentage of CEOs older than 60.

The predominance of older CEOs in companies with revenues between $100 M – $1 B is partially attributable to over half of these CEOs being founders.
Interestingly, there was no apparent correlation between age and overall tenure at a company.

Nor is there an apparent correlation between age and tenure as CEO of that company.
**SO WHERE WERE THE DIFFERENCES?**

CEOs between 38-49 years old do correlate with higher median 3-year growth rates.

In part, this is because companies with revenue between $100 M –$1 B are over-represented in the youngest age group. However, the performance edge of younger CEOs is consistent when looking at CEOs from the smaller companies by themselves.

The edge of younger CEOs is consistent, though more muted, in companies with revenues > $1 B.
Interestingly, the only CEO of a company with > $1 B in revenue who was under 50 outperformed the majority of CEOs.

KEY TAKEAWAYS
Youth can be a real asset to emerging companies, especially those under $1 B. In technology companies, executives familiar with emerging technology tend to be younger.

Ages 50-59 seem to be ideal for optimal company growth for companies > $1 B.

**Topic Five: Tenure**

**Patterns Detected**

Of the CEOs who have been in their position at least 3 years – the focus of our research – over 87% have been at their companies more than 5 years.

The pattern of tenure at their current company for the CEOs in our study is fairly consistent across company size. The exception is that in larger companies the mix of CEOs who have been there less than 10 years is tilted more towards those who have been there less time – between 4 - 6 years.
Of the CEOs who have been in their position at least 3 years – the focus of our research – over 79% of CEOs have been CEO at their companies more than 5 years.

The pattern of tenure as CEO at their current company is dramatically different by company size. CEOs at larger companies are much more likely to be replaced after 5–10 years. Longer tenure at companies with revenues between $100 M – $1 B reflect that over 50% of these CEOs were founders.

Our comparisons in this research are primarily among the 38 public technology companies in New England with at least 3 years of reported results for the current CEO. It is important to observe that including the 13 companies who had replaced their CEOs in the last 3 years (with an average tenure as CEO of .85 years), the average tenure overall as CEO was 5.4 years.

**SO WHERE WERE THE DIFFERENCES?**

Not surprisingly, the median 3-year growth rate was smallest for companies that replaced their CEO in the last 3 years.
• While some CEOs were replaced due to death or age-related retirement, most CEO replacements could be tied to company struggles to reach growth targets.
• It was also surprising to see that the median 3-year growth rate for CEOs who have been in the saddle for 3 – 6 years was significantly higher than that for longer-tenured CEOs.

The difference in median 3-year growth rate was much less for companies with revenues between $100 M – $1 B.

The difference in median 3-year growth rate was markedly greater for CEOs who have been in the saddle for 3 – 6 years in companies with revenues over $1 B.
In the chart below, we compare the 3 year growth rate for the companies that recently changed CEOs for the 3 years before the change, with the growth rate since the new CEO - normalized to a 3 year growth rate – in order to compare it with the last 3 years of growth for the companies with long term CEOs.

Comparing companies with recently changed CEOs against companies that had CEOs in place for at least 3 years is tricky, since there is no 3-year track record for the same period.

The story shown here is that:

- most of the companies who changed CEOs in the last 3 years were growth challenged (the company growth slowed before the transition)
- things have improved slightly after the CEO change
- but growth remains slower than at companies with CEOs who have been in place at least 3 years.

The implication is that when CEO transitions result from growth shortfalls, it can take a period of time to show significant improvement.

**KEY TAKE-AWAYS**

Although there is much talk recently about the average tenure of CEOs declining, this trend is not as strong among technology companies. Only 25% of these companies changed CEOs in the last 3 years - and in 4% of all companies, the CEO transition was due to a death of the founder.

However, it is the case that CEOs who have been in place between 3 - 6 years outperform their peers with longer tenure as CEO, especially in the larger companies.
Topic Six: Combined Chairman and CEO

**Patterns Detected**

Fewer than 50% of companies had independent Chairmen, and companies with revenue between $100 M – $1 B are slightly more prone to allowing one person to hold the combined roles.

**So Where Were the Differences?**

Companies with independent chairmen outperformed companies that combined roles.
The performance edge was more marked in larger companies.

There is a smaller edge for companies with revenue between $100 M - $1 B.
The smaller edge for companies with revenue between $100 M – $1 B may be due to the fact that there has not been an impetus to recruit an independent Chair when a strong founder has successfully transitioned from start-up to mid-sized company. Formalizing a separate Chair role tends to happen as companies mature.

KEY TAKE-AWAYS

Companies with independent chairs do nominally outperform their peers based on median 3-year growth rates. However, the labels can mask actual division of responsibilities.

In some companies, a CEO transitioning to a Chair-only role may influence selection of a cooperative replacement CEO who lets the Chair still call the shots. In other companies, a strong CEO forced to accept an “independent” Chair may influence the selection to retain as much free reign as possible.

This is a controversial area and one that merits more investigation.
Methodology

Vell Executive Search selected public technology companies in New England with revenues over $100 M. Financial and technical data were collected from Hoovers, ZoomInfo, and archived press releases.

Companies where CEOs had been on board for less than 3 years were excluded from most analyses. The key exception was comparing performance of companies where the CEO has been on board for at least 3 years (38 companies) vs. companies that recently replaced the CEO (13 companies).

Companies where the CEOs educational background was not available were excluded from the educational analysis, leaving 34 companies for that analysis.

We intend to expand the analysis and would value hearing about your questions / concerns that may not have addressed in this phase of the research.
About Vell Executive Search

Vell Executive Search is a retained executive search firm that specializes in recruiting board directors, CEOs and C-Level executives in the software industry. Vell has built a reputation for recruiting talented high-performing leadership teams globally.

Our services are designed to help you build strong leadership at the top. We offer retained executive and board level search, reference checking, candidate benchmarking, and access to a pool of interim candidates.

We are a boutique firm with Fortune 500 experience. Veteran senior consultants with backgrounds at the world’s largest executive search firms handle all of our board and C-level assignments. Because our executive recruiters are technology industry specialists, we can focus more time and attention on fewer searches and projects - and drive strong results.

With our unique operational and technical background, Vell becomes deeply versed with your company faster, helping not only find the right candidates, but also excite them about your opportunity and perform assessments to ensure the right skills and cultural match.

WHY OUR CLIENTS CHOOSE US

1. **Deep tech industry expertise** through veteran consultants.

2. **More dedicated time** as consultants have few parallel projects.

3. **Thorough understanding** of your company’s business and culture through comprehensive meetings with leadership team.

4. In-depth view of the executive’s skills and culture fit through behavioral interviews and competency scorecards.

5. **Constant two-way, direct communication** during your search with regular status calls and 24/7 availability.

6. **Insightful and detailed reference checking** through our extensive network of senior executives.

7. **Broad reach of candidates**: no hidden relationships, no parallel searches holding up the best candidates.
Dora Vell

Dora Vell is Managing Partner of Vell Executive Search, a retained firm focused on recruiting top C-level executives and board members in the Software/Technology industry. Vell was a Partner in the Heidrick & Struggles technology practice for seven years. Prior to her career in executive search, Vell was a sales executive at IBM managing a $150m software sales region, and an engineering executive responsible for a 100-person software development team. Vell has published and been quoted in numerous articles including The Wall Street Journal, Forbes, Fortune, Agenda Week, MSNBC, MSNBC, Mass High Tech, the OPUS for the World Economic Forum, Boston Business Journal, Globe and Mail, CIO, and IEEE, and has been a featured speaker at numerous events.

Vell is a member of the National Association of Corporate Directors (NACD), and serves on the board of Framingham State University and the Advisory board of ZoomInfo. She has served on the board of Entrepreneur's Organization, Goodwill, and Mary Centre for developmentally handicapped adults, and the venture firms garage.ca and RBC Capital Partners. She regularly conducts pro-bono search assignments for non-profit organizations, such as CAB Health and Perkins School for the Blind.

Vell received an MBA from the University of Toronto, a Master in Computer Science from the University of Waterloo and a Bachelor in Computer Science from Carleton. She holds seven worldwide software patents.

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