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Appointments of CEOs in US companies: a comparison of 1978–9 and 1989–91

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Abstract A comparison of 418 CEO appointments in US companies in 1978–9 and 1989–91 reveals that over time the frequency of external successions has increased, and a significant relation between the origin of the new top manager and firm's performance was established. The market for top managers appears to have matured.

Keywords CEOs, successions, power

There is a wide recognition in the academic and business communities that top management has a significant impact on a firm's success. Hambrick and Mason (1984) claim that firms are a reflection of their top management.

Given the central role of top management, the question of what is the preferable source of top management successions (external or internal) has received tremendous attention – see Kesner and Sebora (1994) for a review. However, results have been mixed, with a tendency to be insignificant and case-dependent. Even simple propositions such as 'poor performing firms tend to recruit a new CEO from outside' could not be supported.

Recent evidence, such as Datta and Guthrie (1994), reveals however that, in the 1980s, there was a significant correlation between a firm's underperformance and the frequency of external successions, and Vancil (1987) reports an increase over time in the proportion of external successions. This suggests that the market for top managers has been maturing over the past two decades, possibly alongside the market for corporate control, and this maturity process is responsible both for the confusing past results and for the more clear-cut present observations.

The purpose of this paper is to investigate changes over time in the frequency and 'apparent causes' of external successions. Two samples, one from 1978–9 and another from 1989–91, drawn from the same source and handled with the same procedures, are compared. The findings support the market maturity hypothesis.

Factors influencing the successor origin decision: review and hypotheses

Firm's past performance

Ever since the first studies of successor's origin (Carlson, 1961; Grusky, 1964), it has been common to assume that internal successions provide continuity. The internal candidate has developed the existing corporate strategy with the incumbent CEO. Thus, an internal successor is unlikely to disrupt current policies, corporate culture and control structure. Carlson (1961) finds that internal successors made less changes than outside recruits.

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External successions are generally prescribed as a remedy for firm difficulties (Helmich and Brown, 1972; Hambrick and Mason, 1984). When drastic changes are required, an external manager appears more promising because she or he is not bound by the old policies and implicit contracts of the firm. An external succession can enrich the company with what it needs most – fresh ideas and perspectives (Kosnik, 1987). On the other hand, an external manager needs to cope with an induction and learning period, and may confront some opposition from within the organization. Hence, bringing in a manager from outside has some disadvantages too.

Despite the strong intuitive appeal of the proposition that poor economic performance would lead to an external succession, empirical evidence on the issue is mixed. Schwartz and Menon (1985) find that firms in financial distress are more likely to replace management from outside, as evidenced by the fact that 65 per cent of these firms preferred external successions. (On average, external successions account for only 25 per cent of succession events – see Vancil, 1987). In contrast, studies such as those by Friedman and Singh (1989) and Lauterbach and Weisberg (1994) do not find any significant relation between past performance and source of successors. A third variation is presented by Dalton and Kesner (1985) who find a non-linear relation: firms with poor or excellent past performance tend to appoint from inside, while firms with medium past performance use a relatively high proportion of external successions. Finally, Boeker and Goodstein (1993) claim that performance influences successions, but the composition of the board of directors (the percentage of insiders on the board), firm ownership (percentage ownership by insiders) and ownership concentration (numbers of insiders) moderate the relation. Further evidence on the influence of the board is presented in Zajac and Westphal (1996).

It is reasonable to suppose that poorly performing firms prefer appointments from outside, hoping that such appointments would have a better chance of jolting the firm and refreshing its thought. Thus, despite the inconclusiveness of existing evidence, we suggest:

> *Hypothesis 1*: Firms with poor past performance are more likely to appoint their new CEO from external sources.

Firm's size

Another theoretical proposition concerns the relation between firm size and the source of succession (Dalton and Kesner, 1983). The argument is that larger companies have a larger reservoir of personnel and constantly develop and train good management prospects within the firm. Hence, larger firms are less likely to recruit from the outside. In contrast, smaller firms may not have a suitable internal candidate and may be forced to recruit from the outside.

Empirical evidence on the effect of firm size on top management appointments is mixed. Helmich and Brown (1972) report that larger firms use more external recruiting than smaller firms, while Dalton and Kesner (1983) claim the opposite. Schwartz and Menon (1985) find no relation between successor origin and firm size.

It is plausible that larger firms have a deeper reservoir of talented intermediate-level managers who are well-trained and prepared to succeed incumbent management. Hence, despite the mixed evidence of previous research, we predict that:

> *Hypothesis 2*: Large firms are more likely to appoint CEOs from inside.

Number of available positions at the top

The number of vacant positions at the top may be an important determinant of the source of the new CEO. Simplistically, more vacant positions at the top indicate a greater need for external infusion. Less obviously, more than one vacant top position may also imply a higher probability of successfully recruiting an outsider. We propose that prospective managers worry about their power and ability to affect the organization. Hence, candidates from outside the organization particularly are reluctant to join companies that do not offer them 'sufficient' discretion. This is essentially the supply side of the top-management labour market. It is not enough that the company demands an external succession. Competent external candidates must be convinced to step in.

Viewing hierarchical power as an important element (Finkelstein, 1992) that can be measured by the number of top positions delegated to the new manager (Hambrick & Finkelstein, 1987; Harrison, Torres & Kukalis, 1988), we propose:

> *Hypothesis 3*: The more top positions the firm is willing to offer the new manager, the more likely is an external succession.

The maturity of the market for top managers

A key question is whether the development of the economy, labour market and market for corporate control over recent decades has helped to make the succession decisions of firms more efficient.

Previous literature has not discussed this issue. Nevertheless, evidence, such as that of Vancil (1987), that the proportion of external successions has increased over time and findings, such as that of Datta and Guthrie (1994), that in the 1980s poor performance was associated with external successions, prompt:

> *Hypothesis 4*: Due to the development of the markets for top managers over recent decades, the relationship between external successions, poor past performance, small firm size and number of top positions offered (Hypotheses 1 through 3) would have become more evident in recent years.

Methods

Sample

The sample is based on newspaper reports of top management appointments in US firms. All daily issues of the *Wall Street Journal* in the years 1978–9 and 1989–91 were scanned, with special emphasis on the 'Who's News' section, and all published top-management appointments were recorded. Reinganum (1985) and Kesner and Dalton (1994) use a similar sample selection procedure.

In order to refine and optimize the sample, the following groups were excluded: 1) lower-rank management changes such as an appointment in a division or an appointment to a position other than chief executive officer (CEO), chairman or president; 2) minor management changes such as an appointment of a CEO to an additional top position;[1] 3) managerial changes during periods of merger or restructuring activity in the firm; 4) appointments announced as interim; and 5) appointments in firms that did not trade on the New York Stock Exchange (NYSE) or the American Stock Exchange (AMEX) for at least two years prior to the succession.[2] The final

sample consists of 418 appointment events, 256 (or 61 per cent) in 1978–9 and 162 (39 per cent) in 1989–91.

Measures

For each succession event we either collected or calculated data on the following variables: (1) the source from which the successor was appointed (internal or external);[3] (2) the number of positions offered to the new manager (single or multiple); (3) the pre-succession performance of the firm; and (4) the size of the company (relative to other firms traded on the NYSE and AMEX). Data on the first couple of variables were retrieved from the *Wall Street Journal* articles describing each appointment, while the remaining variables were calculated using the Center for Research in Security Prices (CRSP) tapes, available from the University of Chicago.

One of the two calculated variables utilizes CRSP stock return data. Following Lubatkin *et al*. (1989), we estimate pre-succession performance as the 'excess return' of the firm's stock in the year preceding the appointment. This measure relies on the notion that security markets are efficient in the sense that they follow the firm's value closely and quickly. Thus, any pre-appointment deterioration of the firm must be accompanied by lower than normal stock returns (i.e., negative excess returns) during that period. The excess return measure was preferred to accounting earnings because accounting numbers are frequently marred with problems (Davidson III and Worrell 1988).

Details on the technical calculation of excess returns are provided in the appendix. The procedure employed has previously been used in numerous studies (Reinganum, 1985; Beatty and Zajac, 1987; Friedman and Singh, 1989).

The second calculated variable, relative size of the company, is constructed in two steps using the CRSP data. First, the total market value of the company's common stock is computed at the end of the year preceding the appointment. Then, this stock capitalization figure is ranked relative to the stock capitalization of all New York Stock Exchange and American Stock Exchange companies at that time, in order to determine the stock capitalization decile (relative size) of the firm.

Methodology

The major proposition of this study is that, between the first subsample period (1978–9) and the second (1989–91), the proportion of external successions increased and the link between succession choice and factors such as firm size, past success and number of available top positions was strengthened. To test this proposition, the following logistic regression is designed:

$$\text{Logit (P)} = \text{Ln (P/1-P)} = a_0 + a_1 \text{*Performance} + a_2 \text{*Size} + a_3 \text{*Positions} + b_0 \text{*DUM} + b_1 \text{*Performance*DUM} + b_2 \text{*Size*DUM} + b_3 \text{*Positions*DUM} + e$$

where P is the probability of an external succession; Ln(.) is the natural (base e) logarithm; Performance is the firm's pre-succession performance; Size is firm's size; Positions is the number of top positions the new manager receives; DUM is a dummy variable equal to 0 for the 1978–9 successions and 1 for the 1989–91 successions; and the a's and b's are regression coefficients.

In the above logistic regression, the coefficients a_0 through a_3 represent the first period (1978–9) relation of external successions to its hypothesized determinants, while the coefficients b_0 through b_3 examine how this relation has changed over time. The

coefficient b_0 indicates how much the proportion of external successions changed between 1978–9 and 1989–91 regardless of the hypothesized determinants. The coefficient b_1 measures if the relation between performance and external successions intensified over time. Likewise, the coefficients b_2 and b_3 would show the changes between 1978–9 and 1989–91 in the strength of the relation between external successions and firm size (number of top positions, respectively).

Results

Descriptive statistics

Table 1 outlines the main characteristics of the merged two-period sample. Most of the appointments (68 per cent) were internal, and in the majority of successions (61 per cent) the new manager received more than one top position (for example, was appointed as both CEO and president). In addition, the companies in the sample tend to be slightly larger than average, and the average excess return of the companies in the year preceding the succession is slightly negative (−4.0 per cent).

The Pearson correlation coefficients in Table 1 highlight three statistically significant relations concerning the source of appointment. First, the poorer the firm's performance the more likely are external successions (Hypothesis 1). Second, the larger the company size, the higher is the proportion of internal successions (Hypothesis 2). Third, the more top positions offered to the new manager, the higher is the proportion of external successions (Hypothesis 3).

Differences between 1978–9 and 1989–91

The central task of this study is to observe changes over time in the behaviour of the market for top managers. Table 2 documents the changes in the means of the variables between 1978–9 and 1989–91, and reports the corresponding t-of-difference statistics and p-values.

Table 2 identifies significant differences between the two periods. The proportion of internal successions in our samples has decreased from 72 per cent in 1978–9 to 61 per

Table 1 *Means, standard deviations and correlations for the overall sample*

Variables	*Levels*	*Means*[a]	*SD*	*Pearson correlations*[b] *1*	*2*	*3*
1 Source of appointment	0-external 1-internal	0.68	0.47			
2 Pre-succession performance (excess return)	continuous	−0.04	0.40	0.12 (.012)		
3 Size of the company	ten levels, 1-smallest 10-largest	6.04	2.96	0.22 (.000)	0.05 (.311)	
4 Number of positions offered to new manager	0-one 1-multiple	0.61	0.49	−0.18 (.000)	−0.10 (.037)	−0.01 (.833)

Notes

[a] The number of observations is 418.

[b] Significance levels (p-values) of the correlations appear in parentheses.

Table 2 *Differences between the 1978–9 and 1989–91 subsamples*

Variables	*Levels*	*Period*[a]	*Means*	*SD*	*T-of-difference*[b]
1 Source of appointment	0-external	1978–9	0.72	0.45	2.3
	1-internal	1989–91	0.61	0.49	(0.022)
2 Pre-succession	continuous	1978–9	0.02	0.33	4.3
performance (excess return)		1989–91	−0.14	0.45	(0.000)
3 Size of the company	ten levels,	1978–9	5.86	2.98	−1.5
	1-smallest	1978–91	6.31	2.90	(0.120)
	10-largest				
4 Number of positions	0-one	1978–9	0.67	0.47	3.0
offered to new manager	1-multiple	1989–91	0.52	0.50	(0.003)

Notes

[a] The number of observations is 256 in 1978–9 and 162 in 1989–91.

[b] The probability of receiving a t-statistic greater than the absolute value of the T-of-difference between 1978–9 and 1989–91 appears in parentheses.

cent 1989–91 (t-of-difference= 2.3; p-value= 0.022). The percentage of cases in which the manager was offered more than one top position decreased as well, from 67 per cent in the earlier subperiod to 52 per cent in the later one (t-of-difference= 3.0; p-value= 0.003). Finally, average firm size almost did not change, yet pre-succession performance was on average significantly lower in 1989–91. Interestingly, repeating the analysis with non-parametric statistics such as the Kruskal-Wallis Chi-Square test yields identical conclusions and very similar p-values.

Multivariate tests of the change over time in the choice of successors

More rigorous tests of the research hypotheses employ the multivariate logistic regression technique outlined on the methodology subsection. Table 3 summarizes the results of logistic regression models, in the overall sample and in each of the subperiods.

Table 3 reveals some similarities and dissimilarities between the reviewed subperiods. In both subperiods the coefficient of firm size is significantly negative and the coefficient of number of positions is significantly positive (at the 5 per cent level). Thus, in both subperiods external successions are indicated to be relatively more frequent in smaller firms (Hypothesis 2), and in companies which offer the successor more top positions (Hypothesis 3).

The most staggering difference between 1978–9 and 1989–91 is the coefficient of past performance. In 1978–9 there was no relation between past performance and external successions while in 1989–91 the coefficient of past performance is negative and statistically significant (at the 5 per cent level). This is evidence of some development in the market for top managers in the decade between the late 1970s and the end of the 1980s.

A second indication of development can be noted when the results of the overall period regression, including the subperiod dummies, are analyzed. In that regression the coefficient of DUM (measuring the difference in the intercept between 1978–9 and 1989–91) is positive and statistically significant at the 10 per cent level. This is evidence that the proportion of external successions has increased between 1978–9 and 1989–91, even regardless of the explanatory variables of the model.

Table 3 *Results of logistic regressions of the source of succession*

$$\text{Logit } (P) = \ln(P/1-P) = a + b'X$$

where P is the probability of an external succession conditional on the vector of independent variables; X is the vector of independent variables used in this regression; b is a vector of coefficients; a is the intercept; and ln(.) is the natural (base e) logarithm.

	Coefficients (and p-values in parentheses)		
Independent variables	*1978–9 subperiod*	*1989–91 subperiod*	*Overall period*
Constant	−0.886 (0.02)	0.209 (0.66)	−0.886 (0.02)
Pre-appointment performance	0.246 (0.56)	−0.824 (0.05)	0.246 (0.56)
Firm size	−0.148 (0.00)	−0.193 (0.00)	−0.148 (0.00)
Number of positions offered to new manager	1.070 (0.00)	0.718 (0.05)	1.070 (0.00)
DUM {=0 for 1978–9; =1 for 1989–91}			1.096 (0.07)
Pre-appointment performance * DUM			−1.070 (0.07)
Firm size * DUM			−0.045 (0.57)
Number of positions * DUM			−0.352 (0.48)
Number of observations	256	162	418
Percent of correct predictions of the model	67.3	74.1	71.2
Wald-test Chi-Square of the model (p-value)	18.56 (0.0001)	26.35 (0.0001)	50.12 (0.0001)

Other results of the merged sample regression in Table 3 allow us to focus on the change in the slope of the regression between the first and second subperiods. The statistically insignificant coefficients of Size*DUM and Positions*DUM in Table 3 indicate that there was no change over time in the parameters of the relation between external successions and firm size or number of positions. Only the coefficient of Performance*DUM is significant at the 10 per cent level, suggesting that the relation with past performance changed over time in a way that reinforces the association between poor performance and external successions.

Finally, a few general comments can be made about the adequacy of the model used in the empirical analysis. First, in all of the regressions the null hypothesis that the variables employed have no explanatory power with respect to the source of succession is rejected at the 0.01 per cent significance level, using a Likelihood Ratio Wald-test. Second, diagnostics of the logistic regression reveal that it is well specified. No serious problems of multicollinearity on serial correlation are detected. Furthermore, the model exhibits a significant predictive power. The proportion of correct predictions of the

fitted model relative to the actual succession-choice observations in the overall sample exceeds 71 per cent.

Discussion

The empirical analysis found three significant relations: a) larger firms appoint from their internal sources more frequently than smaller firms; b) when the number of positions offered to the new manager increases, the proportion of external successions also increases; and c) in the later subperiod (1989–91) poorly performing firms have significantly higher proportions of external successions. These findings support hypotheses 1 to 3 of the paper. Hypothesis 4, postulating improvements over time in the managerial labour market, is also upheld. The progress of the market for top managers is evident in the stronger association between poor performance and external successions in the more recent subperiod, and in the higher proportion of external successions during this last subperiod.

The approach that the more-recent-sample results are indicative of progress would argue that, in the 1980s, the intensifying threat of corporate raiders and takeovers forced boards of directors to undertake bolder steps when their companies underperformed. Companies could no longer sweep the dirt under the rug or launder it inside the organization. They had to bring in outside help. It is noteworthy that the proportion of correct predictions of the model has increased from 67 per cent in 1978–9 to 74 per cent in 1989–91 (see Table 3). This may indicate that the choice of successor has become more rational in recent years.

The sampling techniques of the study are not responsible for the documented difference between 1978–9 and 1989–91. This is because both the 1978–9 and 1989–91 subsamples were collected and handled using the same methods. There may, however, be other differences between these subperiods of which we are unaware and which could contribute to the 'change over time' findings. Nevertheless, given the observation of Vancil (1987) that the proportion of external successions increased over time, and given recent evidence that in the 1980s poor performance led to external successions (Datta and Guthrie, 1994), the conclusion that over time the market for managers became more efficient appears more palatable.

Beyond the firm-performance context, the size of the company emerges as a key factor in the succession decision. Large firms motivate workers and build loyalty by promising promotion opportunities within the firm. Large firms also typically develop management talent inside the firm and probably have reasonable internal candidates for the 'vacant' top positions. Consequently, large companies have less incentive and recruit less from outside.

The third relation document in the paper, that between number of positions offered to the new top manager and likelihood of external successions, may be the most intriguing. This relation is consistent with the basic presumption of hypothesis 3 that external successors, as change agents, seek the power ingredient and prefer firms which offer them more top positions. However, a more general conclusion could be that succession decisions must be viewed not only through the glasses of firm's demand but also via the perspective of the prospective candidates (supply side). The importance of the candidate's interests are currently most obvious in the case of an external candidate who must decide whether or not to join the firm. However, in the future, as the labour market for top managers continues to elaborate, we may need to consider and weigh seriously the manager's own perspective much more often.

Conclusions

The paper documents that between the late 1970s and the end of the 1980s there was an increase in the proportion of external CEO successions, and a strengthening of the link between poor performance and subsequent external succession. These findings suggest that in recent years boards of directors became more independent and more assertive in their duty of controlling management, or more open to public's influence. Either way, it appears that the mechanisms and markets for corporate managers and control have developed and become more efficient.

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Notes

1 In many cases the addition of a title does not represent a significant change in the firm. Given our large sample, and the difficulty of past research in extracting conclusive results, we have decided to be conservative and focus on major management changes only.
2 In this study we employ common stock return data, and the focus on companies traded on the NYSE and AMEX for a sufficient period before the succession is meant to increase the accuracy of the data and the reliability of the results.
3 Successors who, prior to the appointment, served on the board of directors of the company, are classified as internal successors.

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Appendix: the calculation of excess returns

Excess returns are estimated using the event study methodology, originated by Fama *et al*. (1969). The procedure proceeds in the following steps:

1) Stock returns are assumed to follow the market model (equation (1)), and the parameters of the model, a_i and b_i, are estimated in the period preceding the 'event window':

$$R_{i,t} = a_i + b_i R_{m,t} + e_{i,t}, \tag{1}$$

where: $R_{i,t}$ = the return of stock i on month t,
$R_{m,t}$ = the return of the market portfolio on month t,
$e_{i,t}$ = a random error term, and
a_i, b_i = intercept and slope coefficients.

In this study an equally weighted portfolio of all stocks on the New York and American Stock Exchanges serves as a proxy of the market portfolio, and the parameters are estimated over the thirty-six months preceding the event window.

2) The excess return of each stock in each month of the event window is estimated as

$$AR_{i,T} = R_{i,T} - \hat{a}_i - \hat{b}_i R_{m,T}, \tag{2}$$

where: T = time relative to the event ($T < 0$ for periods before the event and $T > 0$ for periods over the event),

$AR_{i,T}$= the estimated excess return of stock i on month T,
$R_{i,T}$ = the realized return of the stock i on month T,
$R_{m,T}$ = the return of the equally-weighted market portfolio on month T, and
$\hat{a}_i,\hat{b}_i$ = the parameters of stock i's market model (as fitted in step 1 above).

3) Individual stocks' excess returns are averaged cross-sectionally to obtain

$$AR_T = \sum_{i=1}^{N_T} AR_{i,T}/N_T, \tag{3}$$

where: AR_T = the average excess return of the sample stocks on month T of the event window,
$AR_{i,T}$= the excess return of stock i on month T, and
N_T = the number of stocks for which excess return on month T can be computed.

4) Cumulative average excess return measures are computed as

$$CAR(T_b,T_e) = \sum_{T=Tb}^{T_e} AR_T \tag{4}$$

where CAR (T_b,T_e) = the cumulative average excess return in months T_b through T_e.

In this study only CAR(–12, –1) is calculated. It serves as a measure of the pre-succession performance of the firm.