

## **The Role of Candidate Availability in CEO Dismissals: An Examination of the National Football League**

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*Early theoretical research proposed factors other than performance that affected the likelihood of CEO dismissals. One of these factors is the availability of qualified candidates to take the place of the CEO. Previous research examining candidate availability used industry or firm sizes as measures of candidate availability and generally found that more available candidates led to an increased likelihood of CEO dismissal. However, these measures of candidate available may not reflect an accurate pool of available candidates. Thus, the purpose of the present research is to use a more specific measure for candidate availability. To examine candidate availability, the present research examines head coaching dismissals in the National Football League (NFL) as coaches tend to come from a much smaller pool of available candidates. In the present research, candidate availability is determined from current assistant coaches and former head coaches. Examining candidate availability and other factors which may influence dismissals from 1978 through 2012, logistic regression results indicate candidate available has no effect on dismissals. The statistically insignificant results associated with the role of candidate availability in CEO dismissals challenges the results of the previous literature. The authors encourage organizational theorists to reevaluate candidate availability measures and provide guidance for identifying candidates and composing candidate pools.*

### **INTRODUCTION**

Dismissing a chief executive officer (CEO) is a major event for an organization (Fredrickson, Hambrick, & Baumrin, 1988; Kesner & Sebor, 1994) and one of the most important actions a board of directors takes (Haleblian & Rajagopalan, 2006; Huson, Parrino, & Starks, 2001) as a CEO can represent part of the firm's strategic resources (Keller, 2014). Fredrickson, et al. (1988) defined a dismissal as involuntary, where "[...] the CEO's departure is ad hoc (e.g., not part of a mandatory retirement policy) and against his or her will" (p. 255). These CEO dismissals, and subsequent successions, may result in short-run financial losses for the firm and shareholders (Weisbach, 1988), long-run financial and organizational implications (Huson et al., 2001; Parrino, 1997), and organizational disruptions within the firm (Shen, 2003). In addition, "the dismissal of the CEO is particularly important to organizational theory because this form of succession most requires the understanding of organizational factors" (Fredrickson et al., 1988, p. 255).

Little is known about the factors influencing decisions to dismiss CEOs (Haleblian & Rajagopalan, 2006). Organizational performance is a significant factor, however, it has only been moderately effective in predicting dismissals (Fredrickson et al., 1988; Kesner & Sebor, 1994; Pitcher, Chreim, & Kisfalvi, 2000). Fredrickson et al. (1988) stated dismissing a CEO is not always a rational decision based on organizational performance and proposed a theoretical model for CEO dismissals incorporating socio-political constructs, those factors dealing with “interpersonal relations, coalitions, and power” (Fredrickson et al., 1988, p. 256). These constructs identified by Fredrickson et al. (1988) were the (a) board’s expectations and attributions, (b) board’s allegiances and values, (c) power of the incumbent CEO, and (d) availability of qualified candidates. Furthermore, they warned “[...] those interested in testing the present model should be aware that its *ceteris paribus* argument requires all variables to be included” (p. 268). Data limitations prevented many researchers from including all four socio-political constructs in their models, predominantly excluding the availability of qualified candidates (Cannella & Lubatkin, 1993). Due to data limitations providing only partial empirical tests of the Fredrickson et al. (1988) model, “we are not yet in a position to test the whole model with large sample methods” (Pitcher et al., 2000, p. 626).

The purpose of this paper is to empirically test the comprehensive Fredrickson et al. (1988) model, specifically examining the role of candidate availability in CEO dismissals. Candidate availability is differentiated from other proxies such as firm and industry size and utilizes findings from previous research to develop a measurement of actual qualified candidates to fill CEO vacancies. To test the Fredrickson et al. (1988) model, National Football League (NFL) head football coaching involuntary dismissals from 1978 through 2012 are examined. Previous research noted many similarities between the role and responsibility of an NFL head coach and a CEO (e.g., Ndofor, Priem, Rathburn, & Dhir, 2009). Estimating a logistic regression model, the present research finds candidate availability does not impact dismissals. This result challenges previous research using proxies for candidate availability which showed a significant impact. As a result, the present research contributes to the literature by challenging the existing literature regarding the role that candidate availability plays in regards to organizations deciding to dismiss their CEO.

## LITERATURE REVIEW

Fredrickson et al. (1988) argued, in addition to organizational performance, socio-political factors help explain boards’ decisions to retain or dismiss CEOs. Three of the four socio-political factors identified by Fredrickson et al. (1988) have been examined extensively in the literature. Board’s expectation, proxied by financial analysts’ earnings and earnings per share forecasts, provided empirical evidence in support of CEO dismissals occurring after an organization, and by extension a CEO, achieves results which fail to meet expectations (Farrell & Whidbee, 2003; Puffer & Weintrop, 1991). Boards of directors who have allegiances toward CEOs will likely be less critical of the CEO’s performance, especially for directors who appointed the CEO (Cannella & Lubatkin, 1993). Additionally, longer tenures shared between the directors and the CEO result in enhanced trust, and therefore, stronger allegiances (Kosnik, 1990; Wiersema & Bantel, 1992). CEO dismissals were also less likely to occur when CEOs hold power in a firm, whether through ownership (Boeker, 1992; Salancik & Pfeffer, 1980), CEO duality (Wiersema & Zhang, 2011), or CEO tenure (Lausten, 2002).

The fourth socio-political factor identified by Fredrickson et al. (1988) is the availability of qualified candidates. Fredrickson et al. (1988) theorized if a supply of qualified candidates exists to replace the incumbent CEO, a dismissal is more likely to occur, holding constant all other socio-political factors. Directly examining the link between candidate availability and CEO dismissals is a difficult task. The hiring process of firms is secretive, further limiting the abilities of researchers to examine its effect on dismissals (Tian, Haleblian, & Rajagopalan, 2011). Therefore, researchers examined the availability of qualified candidates by utilizing characteristics pertaining to country-specific industry and firm sizes (e.g., Crossland & Chen, 2013; Parrino, 1997) or omitted the variable altogether (Cannella & Lubatkin, 1993).

One justification for excluding candidate availability from CEO dismissal models is the assumption that a Board of Directors would not dismiss a CEO if a pool of qualified candidates were not readily available (Crossland & Chen, 2013). Neglecting candidate availability in the CEO dismissal model by assuming Board of Directors competence challenges the framework and warning brought forth by Fredrickson et al. (1988). Furthermore, assuming Board of Directors' competence instead of including qualified candidate availability in a model can be challenged by the irrationality in the succession decision making process (Khurana, 2002). Another discrepancy in assuming the existence of a qualified candidate pool is the pool of candidates with the necessary leadership experience is limited and may be further limited when searching for candidates with experience within the particular industry (Davidson III, Ning, Rakowski, & Elsaid, 2008).

Dalton and Kesner (1983) stated larger firms have more potential candidates. Therefore, it is commonplace for researchers to proxy for internal candidates availability by using measures of firm size such as number of employees in a firm (Farrell & Whidbee, 2003) or sales figures (Huson et al., 2001). These proxies often neglect the availability of external candidates and are highly correlated with other factors such as size of the Board of Directors (Huson et al., 2001), which may be linked to CEO dismissals due to decreases in profitability (Eisenberg, Sundgren, & Wells, 1998) or lack of consensus among directors (Pfeffer & Moore, 1980). Thus, these factors are not necessarily due to increased candidate availability.

Though many studies have either neglected candidate availability or attempted to proxy for candidate availability without examining the quantity of actual available and qualified candidates, researchers have been able to produce information regarding candidates for CEO vacancies. Parrino (1997) stated "CEOs at firms in homogeneous industries are more likely to be forced from their positions and are more likely to be replaced by executives from other firms in their industries" (p. 195). Jalal and Prezas (2012) contributed to Parrino's (1997) findings by revealing firms from larger industries (i.e., industries with larger numbers of firms) were more likely to appoint successors from within their industry. Greve (2009) stated the labor market for CEOs is a national one, prompting Crossland and Chen (2013) to operationalize the availability of qualified candidate in their international research to a country-specific candidate pool.

Previous research identified organizational performance, expectations, allegiances and values, CEO power, and candidate availability as possible causes of CEO dismissals. The availability of qualified candidates is often neglected in empirical models, however, variables such as firm size are used as a proxy which does not necessarily reflect availability. The NFL is examined to look at the role that candidate availability impacts decision to dismiss the CEO.

### **Empirical Setting**

To test the Fredrickson et al. (1988) model, data on head coaching dismissals in the National Football League (NFL) from 1978 through 2012 is used. Fredrickson et al. (1988) compared NFL head coaches to CEOs in terms of tenure. Previous research cited the usefulness of data available using sport as an empirical setting to quantitatively examine economic and managerial theories and phenomena, with executive turnover and succession being a common area of research (Day, Gordon, & Fink, 2012).

Formed in 1920, the NFL grew to become the most popular professional sport in the United States. For the 2014-2015 season, the NFL has 32 teams in 30 U.S. Government defined Metropolitan Statistical Areas. According to *Forbes* magazine, the average franchise value for an NFL team in 2013 was \$1.17 billion. In terms of examining involuntary dismissals, the NFL provides homogenous industry (i.e., specific to elite football) in which firm sizes (i.e., rosters and coaching staffs) are similar and industry size is relatively stable (28 teams in 1976 to 32 teams in 2014). Contrary to other industries, the league, its member clubs, and its coaches represent a relatively closed group of individuals whereas one does not see a movement out of the industry (e.g., football coach to automobile company) compared to other industries.

## METHOD

To examine coaching dismissals in the NFL, secondary data was utilized covering a sample period from the 1978-1979 season through the 2012-2013 season regarding head coach turnover and team and coach characteristics. The unit of observation is a team-season. The 35 season sample period yields 1,041 team-season observations. The binary dependent variable of involuntary dismissal (*IDISSMISS*) was coded with the value of 1 if the head coach who began the season was involuntarily dismissed from the team's head coach position. To decipher whether a coach left voluntarily or involuntarily, a review of newspaper articles was utilized through Factiva (academic license) where key terms synonymous with *fired*<sup>1</sup> were used to separate voluntary from involuntary dismissals.

### Independent Variables

The independent variables revolve around the pool of available and qualified candidates who would be likely replacements for a dismissed head coach. Most NFL head coach successors are already employed by an NFL team as offensive and defensive coordinators. In addition, former NFL head coaches who departed from their previous position are also available to be hired (Mielke, 2007; Solow, Solow, & Walker 2011). As a result, variables for available and qualified candidates for both NFL coordinators and former NFL head coaches are used. The assumption made in the present research is NFL offensive and defensive coordinators aspire to secure NFL head coaching positions, and are, therefore, available per the criteria established by Fredrickson et al. (1988). Fee, Hadlock, and Pierce (2006) found NFL coordinators promoted to NFL head coaches were often high performing individuals on high performing teams. Therefore, NFL coordinators are deemed to be available and qualified if they meet both of the following criteria. First, in the observed season, they were on a team which exhibited sustained organizational performance defined by an average team winning percentage within the top 20 percent of the NFL (which would be the top six teams in the current NFL structure, including any additional teams who are tied for a top six position) over the three year period prior to the observed season. Second, in the observed season, their team had a top 20 percent offense (defense) in terms of points scored (allowed). If an offensive (defensive) coordinator satisfies both of these criteria, he is included in the offensive and defensive coordinator pool (*OCDCPOOL*).

For the pool of available and qualified former head coaches, head coaches who were involuntarily dismissed (e.g., did not retire or otherwise voluntarily leave the organization) in the observed or previous season and who were not hired as head coaches at the end of the observed season are considered to be available candidates for head coaching positions. Since former head coaches already demonstrated their abilities as head coaches, and some of the uncertainty associated with promotions is reduced (Longley & Wong, 2011), coaches can be evaluated based on their head coaching performance. Former head coaches are identified as qualified if they: (a) had more winning seasons (i.e., full seasons in which they won more games than they lost) than non-winning seasons or (b) won more than half of their games in their career as a head coach. If a former head coach is available, qualified, and involuntarily dismissed in the previous season, he is included in the *PREVYRHC* pool of candidates and if the available, qualified head coach was dismissed in the observed season, he is included in the *CURRYRHC* pool of candidates.<sup>2</sup> For teams dismissing their winning head coach during the season, one candidate is subtracted from *CURRYRHC* since the dismissing team is not likely to rehire the same head coach dismissed during the observed season. The three aforementioned independent variables (i.e., *OCDCPOOL*, *PREVYRHC*, and *CURRYRHC*) are tabulated to form a fourth variable, the entire NFL head coach candidate pool (*CANDPOOL*).

### Control Variables

To control for other confounding factors, 21 control variables are utilized. These control variables fall into the following categories: (a) organizational performance, (b) the other three socio-political factors identified by Fredrickson et al. (1988) (i.e., expectations and attributions, values and allegiances, and incumbent power), (c) candidate-related controls, (d) ownership types, and (e) demographic variables.

Regular season winning percentage in the observed season (*WINPCT*) is used to measure organizational performance.

Expectations can be based on previous organizational performance, which may have established a standard for the organization, as well as current expectations. Performance expectations are modeled in two ways. The first way is based on historical organizational performance similar to Holmes (2011), accounting for performance in terms of regular season win percentage from the previous season ( $WINPCT_{j-1}$ ), two seasons prior to the observed season ( $WINPCT_{j-2}$ ), and three through ten seasons prior to the observed season ( $WINPCT_{j-3 \rightarrow 10}$ ). For teams which have not been in existence one, two, or three years prior to the observed season, the observation is removed from the sample. For  $WINPCT_{j-3 \rightarrow 10}$ , if a team has not been in existence for the full ten years prior to the observed season, the average for the available years in that time span is used.

The second way looks at evaluations by outside individuals. In non-sport businesses, these expectations generally come from outside investment analysts (Puffer & Weintrop, 1991). These outside analysts provide estimates regarding key performance measures and “mediate information flows between companies and other market participants who may invest in or do business with these firms” (Pollock & Gulati, 2007, p. 347). Previous research found upper managers of organizations not performing relative to the expectations are more likely to be dismissed (e.g., Farrell & Whidbee, 2003; Puffer & Weintrop, 1991).

To model outside performance expectations, the percentage of regular season games a team covered against the point spread as established by the betting markets (*COVERATS*) is used. A point spread is a prediction regarding the closeness of the game when including all relevant information (Kilduff, Elfenbein, & Staw, 2010). Despite various biases found in betting markets (e.g., sentiment bias), point spreads are still efficient predictors of actual game outcomes (Sauer, 1998). In addition, unlike non-sport CEOs who actively manage external performance expectations (Farrell & Whidbee, 2003), NFL coaches do not actively manage point spreads.

Frederickson et al. (1988) noted that board’s allegiances and values were also important indicators of a CEO dismissal. Board’s allegiances and values are operationalized in three ways. The first allegiances and values variable accounts for the observed head coach’s win percentage against conference opponents which was also used by Holmes (2011). Due to the scheduling differences between college football and the NFL, examining games against division opponents in the NFL would be highly correlated with overall winning percentages since for a large portion of this sample, half of a team’s opponents were from within their division. Another allegiances and values variable Holmes (2011) used was a bowl games variable which subtracts the number of bowl game losses from bowl game. Holmes found this variable to be statistically insignificant. Bowl games, which are postseason games typically played by highly visible and top performing college teams, are similar to playoff games in the NFL. A head coach’s playoff success in this study was calculated in the same fashion as in the Holmes model with playoff losses subtracted from playoff wins (*PLAYOFFS*).

The board of directors makes the CEO dismissal decisions (Mintzberg, 1983). Therefore, if a relationship has been established and concurrent tenures have forged a partnership in which both parties have agreed on the desired direction of the organization, allegiances will be strong and CEO dismissal will be less likely (Mizruchi, 1983; Pfeffer & Moore, 1980). To model this relationship, Holmes (2011) used a dichotomous variable indicating if the college had a new athletic director. Athletic directors are responsible for making personnel decisions in athletic departments such as the dismissal of a head coach (Marburger, 2013). In the NFL, a general manager who may also be responsible for personnel decisions regarding the hiring and firing of athletes (Brown, Farrell, & Zorn, 2007). Instead of using a dichotomous variable to establish whether a new general manager was hired for an observed season, the present research uses a variable that subtracts the number of seasons the general manager has been employed by the team from the number of seasons the head coach has been employed by a team (*HCGMDIFF*).

The remaining major factor influencing CEO dismissal according to Fredrickson et al. (1988) is incumbent power. In the NFL, it is possible for the head coach to hold an additional position within the organization which allows him to make direct decisions on matters such as the hiring and firing of

athletes such as a general manager or director of player personnel position. A dichotomous variable (*DUALROLE*) in this study is used to identify whether a head coach has this additional role and is coded with the value of 1 if he does have a dual role. Fredrickson et al. (1988) also stated that, due to the increasing power of the CEO over time, there is an inverse relationship between CEO tenure and the likelihood of dismissal. Therefore, a variable for head coach tenure (*TENURE*) is included. Additionally, to account for a possible reluctance to dismiss a CEO with less than one year of tenure, a dichotomous variable indicating whether a CEO is in his first year (coded with the value of one) or not (coded with the value of zero) is included in the models (*FIRSTYR*).

To separate the effects of the candidate pool independent variables from often used proxies such as firm size, a firm size variable is included in the models (*FIRMSIZE*).<sup>3</sup> *FIRMSIZE* is the size of the market for the metropolitan statistical area population (in millions) of the organization. Since the independent variables of interest measure the supply of qualified candidates available for head coach positions, it is also important to control for candidate demand. Consistent with Allen and Chadwick (2012), the number of head coaching vacancies in the observed season (*OPENINGS*) is included, regardless of head coach departures.<sup>4</sup> This approach prevents artificially inflating the correlation among the observations with dismissals.

Different types of ownership structures can result in distinct variations in the organizational decision-making process. Carroll (1984) suggested founders of organizations typically possess characteristics which guide their decision-making differently from their successors. Andres (2008) reinforced the idea that founders operate differently by examining differences between founding-family owned organizations and family owned organizations which were not founders. Therefore, a dichotomous variable indicating whether an owner was the original owner of the organization (*ORIGINAL*) is included in the model. This variable is coded with a value of 1 for original owners and 0 otherwise.

Though Fredrickson et al. (1988) focused on publicly owned organizations, our unique data set incorporates publicly owned, consortium owned, sole proprietor owned, and family owned organizations. As stated previously, different ownership structures may cause an organization to behave differently (Winfree & Rosentraub, 2012). Thus, four dichotomous and mutually exclusive ownership variables are used in the model with the reference group being franchises that are publicly owned. The majority owner of each observed franchise is categorized as either owners by consortium (*CONSORT*), single owners (*SINGLE*), or family owners. Acknowledging the first generation of family ownership may be significantly different from subsequent generations (Villalonga & Amit, 2006), family owners are partitioned into the first generation of family ownership (*FIRSTGEN*) and subsequent generations of family ownership (*SUBGEN*). Data on ownership types was gathered from online media sites, which identified majority and original owners (primarily through pro-football-reference.com). Once majority owners were identified, media sites were used to best decipher whether the majority owner was a sole owner, consortium owner, first generation owner, or subsequent generation owner.

The final two control variables are demographic variable for the age of the head coach (*AGE*) and whether the head coach is a visible racial minority (*MINORITY*). The minority status of head coaches in relation to dismissals has been examined in previous research regarding NFL head coach employment opportunities (Holmes, 2011; Solow et al., 2011).

## MODEL

The model takes the broad form:

$$\begin{aligned}
 IDISMISS_{ij} = & \beta_1(INDVAR)_{ij} + \beta_2(WINPCT)_{ij} + \beta_3(WINPCT)_{i(j-1)} + \beta_4(WINPCT)_{i(j-2)} + \beta_5(WINPCT)_{i(j-3 \rightarrow 10)} \\
 & + \beta_6(COVERATS)_{ij} + \beta_7(PLAYOFFS)_{ij} + \beta_8(DIVISION)_{ij} + \beta_9(HCGMDIFF)_{ij} + \beta_{10}(HCOWNDIFF)_{ij} + \\
 & \beta_{11}(DUALROLE)_{ij} + \beta_{12}(TENURE)_{ij} + \beta_{13}(FIRSTYR)_{ij} + \beta_{14}(FIRMSIZE)_{ij} + \beta_{20}(OPENINGS)_{ij} + \\
 & \beta_{15}(ORIGINAL)_{ij} + \beta_{16}(SINGLE)_{ij} + \beta_{17}(CONSORT)_{ij} + \beta_{18}(FIRSTGEN)_{ij} + \beta_{19}(SUBGEN)_{ij} + \\
 & \beta_{21}(MINORITY)_{ij} + \beta_{22}(AGE)_{ij} + e_{ij}
 \end{aligned} \tag{1}$$

where  $i$  indicates team,  $j$  indicates season, and  $e$  is the error term. Since the dependent variable (*IDISMISS*) is a dichotomous variable, discrete estimation techniques such as logit and probit should be used (Maddala, 1983). In the present study, a logistic regression model is estimated.

### Estimation Issues

The correlation coefficients between each of the variables in the model were examined to look for multicollinearity. None of the coefficients exceeded the standard threshold of 0.8, indicating that multicollinearity is not an issue (Tabachnick & Fidell, 2007). A Hausman test was conducted and indicated controlling for random effects was more appropriate than fixed effects.

In addition, some team-season observations are eliminated in the present research. Some teams have not been in the NFL for at least three seasons. The 1978 observations from the Tampa Bay Buccaneers and Seattle Seahawks were removed due to being established in 1976 and not having sufficient data for  $WINPCT_{j,3 \rightarrow 10}$ . Sufficient data was also not available for  $WINPCT_{j,3 \rightarrow 10}$  for the Carolina Panthers or Jacksonville Jaguars in 1995, 1996, and 1997 since their first NFL season was in 1995. Similarly, the Cleveland Browns reemerged in 1999 and the Houston Texans' first season was in 2002, so each of these teams is missing data for  $WINPCT_{j,3 \rightarrow 10}$  for the first three seasons of their respective existences. As a result of these eliminations, the final sample has 1,027 team-season observations.

## RESULTS

Summary statistics revealing the means and standard deviations of the dependent variable, independent variables, and control variables are exhibited in Table 1. In this sample, the average annual dismissal rate was 15.1%. An average of five coordinators and one dismissed head coach from the previous season were identified as for the proxy of being available and qualified for a head coach position. About one head coach per three seasons who was dismissed within the season fit the criteria of being a qualified head coach candidate.

**TABLE 1**  
**SUMMARY STATISTICS**

Variable	Mean	Std. Dev.	Min	Max	Median
DISMISS	0.151	0.358	0	1	0
OCDPOOL	5.022	1.527	1	9	5
PREVYRHC	1.246	1.131	0	4	1
CURRYRHC	0.339	0.675	0	3	0
CANDPOOL	6.608	2.098	1	13	6
WINPCT	0.501	0.188	0.000	1.000	0.500
WINPCT <sub><i>i</i>-1</sub>	0.502	0.188	0.000	1.000	0.500
WINPCT <sub><i>i</i>-2</sub>	0.502	0.189	0.000	1.000	0.500
WINPCT <sub><i>i</i>-3→10</sub>	0.496	0.117	0.000	0.786	0.494
COVERATS	0.513	0.119	0.188	0.875	0.500
PLAYOFFS	0.455	2.257	-4	12	0
DIVISION	4.101	12.979	-18	67	2
HCGMDIFF	-2.316	7.295	-45	22	0
HCOWNDIFF	-14.844	16.567	-83	24	-11
DUALROLE	0.136	0.343	0	1	0
TENURE	3.467	4.279	0	28	2

FIRMSIZE	4.309	4.196	0.220	19.832	2.857
OPENINGS	5.828	2.251	1	11	6
ORIGINAL	0.202	0.401	0	1	0
SINGLE	0.394	0.489	0	1	0
CONSORT	0.219	0.414	0	1	0
FIRSTGEN	0.213	0.410	0	1	0
SUBGEN	0.139	0.346	0	1	0
PUBLIC	0.034	0.182	0	1	0
MINORITY	0.097	0.297	0	1	0
AGE	50.559	6.867	32	72	50
N=1,027					

Table 2 displays the random effects logistic regression results. In Table 2, five different models estimations are displayed. The first three models include only one of the three elements of the candidate pool explained earlier in this article. The fourth model includes each candidate pool qualification. The final model includes a combined count of these three elements. The independent variables of interest *OCDCPOOL*, *PREVYRHC*, and *CANDPOOL* have negative coefficients and are statistically insignificant in each of the models. On the other hand, *CURRYRHC* has a positive coefficient, but is also statistically insignificant.

**TABLE 2**  
**LOGISTIC REGRESSION RESULTS; DEPENDENT VARIABLE IS *IDISMISS***

Variable	OCDCPOOL Model	PREVYRHC Model	CURRYRHC Model	All Pools Model	CANDPOOL Model
OCDCPOOL	-0.052 (0.070)	--	--	-0.055 (0.071)	--
PREVYRHC	--	-0.067 (0.097)	--	-0.043 (0.100)	--
CURRYRHC	--	--	0.156 (0.152)	0.153 (0.155)	--
CANDPOOL	--	--	--	--	-0.030 (0.052)
WINPCT	-6.194*** (0.893)	-6.149*** (0.893)	-6.165*** (0.891)	-6.162*** (0.893)	-6.177*** (0.893)
WINPCT <sub>i-1</sub>	-0.638 (0.729)	-0.638 (0.730)	-0.652 (0.729)	-0.616 (0.731)	-0.638 (0.730)
WINPCT <sub>i-2</sub>	0.917 (0.641)	0.890 (0.643)	0.877 (0.642)	0.874 (0.642)	0.912 (0.642)
WINPCT <sub>i-3→10</sub>	1.331 (1.120)	1.310 (1.120)	1.333 (1.117)	1.385 (1.120)	1.316 (1.120)
COVERATS	-2.431** (1.211)	-2.453** (1.208)	-2.453** (1.209)	-2.457** (1.212)	-2.438** (1.209)

PLAYOFFS	-0.231*** (0.077)	-0.226*** (0.077)	-0.224*** (0.077)	-0.230*** (0.078)	-0.229*** (0.077)
DIVISION	-0.044*** (0.017)	-0.044*** (0.017)	-0.044*** (0.017)	-0.045*** (0.017)	-0.044*** (0.017)
HCGMDIFF	-0.032** (0.014)	-0.031** (0.015)	-0.033** (0.014)	-0.032** (0.015)	-0.032** (0.015)
HCOWNDIFF	-0.006 (0.009)	-0.006 (0.009)	-0.005 (0.009)	-0.006 (0.009)	-0.006 (0.009)
DUALROLE	-0.432 (0.352)	-0.443 (0.351)	-0.460 (0.350)	-0.428 (0.353)	-0.435 (0.353)
TENURE	0.102** (0.046)	0.103** (0.046)	0.104** (0.046)	0.102** (0.046)	0.102** (0.046)
FIRSTYR	-1.511*** (0.358)	-1.488*** (0.357)	-1.496*** (0.357)	-1.493*** (0.358)	-1.502*** (0.357)
FIRMSIZE	-0.020 (0.027)	-0.022 (0.027)	-0.021 (0.027)	-0.020 (0.027)	-0.021 (0.027)
OPENINGS	0.010 (0.047)	<0.001 (0.049)	-0.004 (0.049)	-0.009 (0.050)	0.008 (0.047)
ORIGINAL	-0.285 (0.298)	-0.275 (0.297)	-0.264 (0.297)	-0.293 (0.299)	-0.281 (0.298)
SINGLE	0.263 (0.794)	0.266 (0.797)	0.174 (0.794)	0.269 (0.801)	0.272 (0.799)
CONSORT	0.723 (0.869)	0.718 (0.870)	0.602 (0.868)	0.707 (0.876)	0.733 (0.874)
FIRSTGEN	0.245 (0.815)	0.240 (0.815)	0.158 (0.814)	0.245 (0.819)	0.250 (0.818)
SUBGEN	0.140 (0.892)	0.147 (0.894)	0.012 (0.889)	0.143 (0.902)	0.155 (0.900)
MINORITY	0.111 (0.367)	0.129 (0.367)	0.126 (0.367)	0.129 (0.367)	0.117 (0.367)
AGE	0.013 (0.015)	0.013 (0.015)	0.014 (0.015)	0.014 (0.016)	0.013 (0.015)
Constant	0.442 (1.554)	0.340 (1.540)	0.297 (1.535)	0.509 (1.554)	0.397 (1.552)
Random Effects	Yes	Yes	Yes	Yes	Yes

Notes: Standard errors are in parentheses. \*\*p<.05; \*\*\*p<.01

In all five models, the variables *WINPCT*, *COVERATS*, *PLAYOFFS*, *DIVISION*, *HCGMDIFF*, and *FIRSTYR* all have negative and statistically significant coefficients. *TENURE* is also statistically significant in each of the models, but has a positive coefficient. All of the measures of previous winning

percentages, *HCOWNDIFF*, *DUALROLE*, *FIRMSIZE*, *OPENINGS*, all of the ownership types, and both demographic variables were statistically insignificant in all five models.

### **Robustness Checks**

Several robustness checks were conducted to analyze the robustness of the findings presented in Table 2, especially in relation to the independent variables. Various other measures were utilized in an attempt to objectively identify and accurately measure the pool of candidates such as college coaches who were ranked in the top five of the team rankings and under the age of 50 years old, top offensive coordinators who worked under head coaches from defensive-minded backgrounds and vice versa, all head coaches who were dismissed the year prior who were unable to secure head coaching positions in the observed year rather than just those with winning records, and all head coaches who were dismissed during the observed season rather than just those with winning records. Other control variables were included in the model such as tenure squared, organization age, season (i.e., year), dummy variables for major institutional changes within the NFL (i.e., the salary cap<sup>5</sup> and the Rooney Rule<sup>6</sup>), and a count of voluntary exits in the season. None of these variations significantly altered coefficient magnitudes or statistical significance of the independent or control variables which provides evidence for the robustness of the results presented in Table 2.

### **DISCUSSION**

Understanding the socio-political determinants of CEO dismissals is an important area of research (Fredrickson et al., 1988). The focus of the present study was to use the framework provided by Fredrickson et al. (1988) to develop a comprehensive model for dismissals which included the availability of qualified candidates by identifying actual candidates rather than a proxy for the variable such as firm or industry size. Previous research guided the formation of a pool of available and qualified candidates to quantify the degree to which candidate availability increased the likelihood of CEO dismissals. Additionally, other factors pertinent to CEO dismissal decisions were identified such as ownership types were included in this study.

Whether estimating regression models to examine the impact of each of the independent variables separately, together, or all combined in a single variable, the availability of qualified candidates, as defined in the present study, has no statistically significant effect on the likelihood of a CEO being dismissed. Furthermore, with one exception, each of the independent variables measuring candidate pools had negative coefficients which, if statistically significant, would be counterintuitive since previous literature states candidate pools and CEO dismissals should have a positive relationship (Fredrickson et al., 1988; Parrino, 1997). The statistically insignificant findings challenge the previous research which used firm and industry size to proxy for candidate availability. The insignificant results may also be a reflection of candidate pools which include unqualified candidates or exclude qualified candidates, or the irrationality of decision makers in the CEO dismissal process.

The candidate pools were proxies for dismissed CEOs and promising top managers who could likely be promoted to fill a CEO vacancy. Though necessary measures were taken to determine which candidates would be included within the candidate pools, it is probable that candidates were included in the pool that was not being considered for any CEO vacancies, and conversely, there were candidates being considered for vacancies who were not included in the pools. However, the extent to which these instances occurred are unknown since data is limited with the information pertaining to team's candidate list. One factor which could have significantly affected the candidates being considered to fill vacancies is the preferences of the firm and possible CEO-firm matches. Fee et al. (2006) found no statistically significant difference in promotion rates between offensive and defensive coordinators, however, Solow et al. (2011) noted "[b]eing an offensive coordinator increases the probability of promotion...although [the effect is] small and only marginally significant" (p. 335). Perhaps certain firms will be more inclined to hire a specific type of CEO, whether the criterion is based on the executive's specialty, strategic philosophy, or what type of CEO the predecessor was.

Another possible explanation for the null results of the independent variables, and the explanation most supported by previous literature, is the idea of decision makers behaving irrationally. Boards of directors have been known to behave irrationally when dismissing CEOs by not acting in the best interest of the firm and. These irrational decisions may come at the detriment of organizational performance (Fredrickson et al., 1988) and may not have included a complete set of information on which to base these important decisions (Khurana, 2002). Therefore, boards of director may dismiss CEOs without having a sufficient pool of candidates to secure a proficient successor.

The *FIRMSIZE* variable was also statistically insignificant in this study. Though previous studies have found significant results for this variable, the differences in the observed industries and proxies are likely the cause for the differences in results. Firms within the NFL are relatively homogenous in terms of the number of the CEOs oversees. Therefore, firm size is largely controlled for already. In comparison to the studies which have used firm revenues as measures of firm size and therefore candidate availability, the proxy used in the present study may not be representative of firm revenues due to unique attributes of the NFL such as revenue sharing. Furthermore, even if revenue was an adequate proxy for firm size in the NFL, the data is not publicly available. Even though firm size was not measured in this study, the relative homogeneity of firms within the NFL virtually controls for this factor.

Despite evidence indicating ownership structures affect decision making, no evidence exists in the context of the present study to support this claim. This lack of supporting evidence may be attributed to the varying degrees of involvement in decision making from the firm ownership. Some NFL owners may play an active role in the decision to retain or dismiss CEOs, whereas other owners may leave this decision entirely to the discretion of general managers. The lack of owner involvement by at least some organizations may have contributed to the statistically insignificant coefficients for the *HCOWNDIFF* variable when the *HCGMDIFF* variable was significant.

The regression models did, however, produce statistically significant results for organizational performance as well as at least one variable representative of each of the other three sociopolitical factors identified by Fredrickson et al. (1988). Table 3 presents the actual change in the probability of dismissal. As shown in Table 3, going from the worst organizational performance to the best organizational performance, within the scope of this sample, decreases the likelihood of CEO dismissal by 62%, with all other variables held constant at their means. Organizational performance accounts for the most substantial change in CEO dismissal likelihood. The second most substantial factor is that of CEO tenure which, according to Fredrickson et al. (1988), represents both the board's allegiances and values and the incumbent CEO's power socio-political constructs. CEOs with 28 years of tenure within an organization results in a 42% increase in the likelihood of dismissal when compared to a CEO with less than one year experience. This positive relationship between CEO tenure and likelihood of dismissal is contrary to the Fredrickson et al. (1988) model for CEO dismissals, however, it is a relationship found in similar studies (Holmes, 2011). Differences among previous literature and the present study may be attributable to the inclusion of a variable in the present study which measures difference in tenure between the head coach and board of directors. The coefficient on this variable is negative and significant indicating an increase in CEO tenure, relative to board of director tenure, decreases the probability of CEO dismissal. This variable represents incumbent CEO power and reduced the likelihood of dismissal by 19% when examining the difference between the maximum years of CEO tenure less board tenure (i.e., 22 years) and the minimum years of CEO tenure less board tenure (i.e., 45 years) in this sample.

The other significant variables representing the board's allegiances and values were measures of career success against close rival and elite competitors. A CEO with the maximum success against close rivals realizes a 16% decrease in dismissal likelihood when compared to a CEO with the minimum success against close rival competitors in this sample. Similarly, a CEO with the most success against elite competitors can expect a 17% decrease in the likelihood of dismissal relative to the least successful CEO in terms of competing against elite rivals. These two board allegiances and values variables are consistent with previous literature stating the more a CEO embodies characteristics valued by the board of directors, the less likely a CEO dismissal will occur. The only statistically significant variable representing the board's expectations was that of the expectations of the observed year (i.e., not

expectations based on previous organizational performance). A CEO who meets or exceeds expectations the most in this sample experiences an 11% decrease in dismissal probability compared to a CEO who most infrequently meets or exceeds expectations.

**TABLE 3**  
**CHANGE IN DISMISSAL PROBABILITY AS VALUES MOVE**  
**FROM MINIMUM TO MAXIMUM**

Variable	<i>OCDCPOOL</i> Model	<i>PREVYRHC</i> Model	<i>CURRYRHC</i> Model	All Pools Model	<i>CANDPOOL</i> Model
OCDCPOOL	-0.027	--	--	-0.029	--
PREVYRHC	--	-0.018	--	-0.011	--
CURRYRHC	--	--	0.035	0.035	--
CANDPOOL	--	--	--	--	-0.023
WINPCT	-0.620	-0.616	-0.617	-0.615	-0.619
WINPCT <sub>j-1</sub>	0.042	0.042	-0.043	0.040	0.042
WINPCT <sub>j-2</sub>	0.060	0.059	0.058	0.057	0.060
WINPCT <sub>j-3→10</sub>	0.062	0.061	0.062	0.064	0.061
COVERATS	-0.111	-0.112	-0.112	-0.112	-0.111
PLAYOFFS	-0.167	-0.164	-0.163	-0.166	-0.166
DIVISION	-0.160	-0.161	-0.161	-0.161	-0.161
HCGMDIFF	-0.192	-0.188	-0.200	-0.194	-0.189
HCONDWINDIFF	-0.050	-0.047	-0.037	-0.045	-0.048
DUALROLE	-0.024	-0.025	-0.026	-0.024	-0.025
TENURE	0.428	0.431	0.438	0.423	0.429
FIRSTYR	-0.070	-0.070	-0.070	-0.069	-0.070
FIRMSIZE	<-0.001	-0.025	-0.024	-0.023	-0.024
OPENINGS	0.006	<0.001	-0.003	0.006	0.005
ORIGINAL	-0.017	-0.017	-0.016	-0.017	-0.017
SINGLE	0.017	0.018	0.011	0.018	0.018
CONSORTIUM	0.060	0.056	0.045	0.054	0.057
FIRSTGEN	0.017	0.016	0.011	0.017	0.017
SECONDGEN	0.010	0.010	<0.001	0.010	0.011
MINORITY	0.007	0.009	0.009	0.009	0.008
AGE	0.034	0.034	0.036	0.036	0.033

## CONCLUSION

This research examined the role of candidate availability in CEO dismissal decisions by examining NFL head coaching dismissals. The present study offered an original perspective on candidate availability in which candidates were viewed as individuals available for CEO vacancies rather than being proxied by industry or firm sizes. The unique sample of data was able to control for both industry and firm size further isolating the effects of the candidate pools. The null findings contribute to the extent literature by

challenging the effect of candidate availability on CEO dismissals and providing guidance on identifying candidate pools. Organizational theorists are encouraged to build upon this study to further evaluate the effect of candidate pools separate from firm and industry size.

The present study is not without its limitations. One limitation faced revolves around how the candidate pools were measured and the boards of directors make their decisions. Limited information is available regarding which candidates are interviewed to potentially fill CEO vacancies. Furthermore, the criteria used by boards of directors to evaluate and select candidates are not disclosed to the public. Future research can work towards reducing these limitations by searching through media sources to identify which candidates were actually interviewed for which vacancies to determine how firms decide who to interview and ultimately who they select. A component of this may incorporate board's allegiances and values in determining the pool of candidates. Future research could also examine if the caliber of candidates influences decisions rather than limiting the candidate pool to a count of available and qualified candidates. Finally, future research can examine whether boards dismiss CEOs based on herd behavior in which boards decisions are based on the actions of boards at other firms (Banerjee, 1992). Finally, future research could build on the role of ownership structures in CEO dismissals, specifically examining the role of ownership structure and involvement in CEO dismissal decisions.

## ENDNOTES

1. Other keywords used to differentiate dismissals from voluntary departures were dismissed, ousted, and forced to resign.
2. There was no significant difference between the raw number of fired head coaches and the number of head coaches standardized by the number of teams per season.
3. Another often used proxy for candidate availability is industry size. The number of franchises in the NFL was included as a control variable, but since the number of franchises remained relatively constant (only varying from 28 to 32) in the sample period and the variable is statistically insignificant and did not alter the other variable coefficients in terms of sign and significance, the variable was excluded from the model.
4. For the observations in which a dismissal is recorded, the OPENINGS variable consists of the number of vacancies minus the vacancy which is a result of the observed dismissal.
5. The salary cap was instituted in 1993 and set limits on how the collective salary of the team which could be paid by an NFL franchise.
6. The Rooney Rule was instituted in 2003 and requires NFL teams to interview at least one minority candidate for head coaching vacancies (Solow et al., 2011).

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