

Evaluating the Likelihood of the Glass Cliff Phenomenon for Female CEOs in College and Universities

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Abstract

The glass cliff phenomenon (GCP) maintains that women are more likely to lead risky organizations than men. Quantitative measures of risk for assessing a possible GCP exist for leaders in the business sector, but no quantitative measures exist for college or university leadership. This article tests one variable of risk for college and university institutions, the financial responsibility composite score (FRCS), to see if it measures the GCP in college or university chief executive officer (CEO) hires. Using an ex post facto causal-comparative design, gender and FRCS in private American colleges and universities were analyzed using the Integrated Postsecondary Education Data System data. Purposive sampling randomly paired institutions with female CEOs with similar institutions with male CEOs. Using the U.S. Department of Education's FRCS database, the researcher reviewed patterns in FRCS before and after CEO hires over three studies. No statistically significant results were observed, demonstrating that there is no indication that female CEOs are hired into riskier colleges or universities when utilizing FRCS. Future studies should further investigate the GCP using alternative measures of risk.

Keywords: glass cliff, college or university leadership, chief executive officer, gender equity

Introduction

ender inequality in leadership roles is a prevalent issue. Shifting societal norms and the acknowledgment of gender inequality have opened more leadership positions to women than in previous decades; however, many of those positions come with an elevated level of risk. This risk subsequently impacts women's participation, success, and tenure in these roles. It is surprising that this issue—known as the glass cliff phenomenon (GCP)—remains under-researched. The GCP suggests that female leaders rather than male leaders are hired more often at institutions with more risk, putting the female leaders' careers at greater risk (Brady et al., 2011; Elsaid & Ursel, 2018; Main & Gregory-Smith, 2018; Morgenroth et al., 2020; Ryan & Haslam, 2005; Ryan & Haslam, 2007). Ryan and Haslam (2005) identified the GCP in publicly traded companies by observing gender differences in hiring practices that co-occur with financial metrics of risks. When companies had greater fiscal risk, female leaders were hired more frequently than male leaders (Ryan & Haslam, 2005). These new female leaders faced additional financial challenges that similar male leaders did not experience. As the company was already in deficit, the new female leaders were more likely to be fired for failing to recover financially (Main & Gregory-

Smith, 2018). Male leaders were hired more frequently at financially stable companies and had a better likelihood of lengthier steady careers.

The GCP has been established both qualitatively and quantitatively in select industries such as business (Cook & Glass, 2013; Elsaid & Ursel, 2018; Main & Gregory-Smith, 2018; Ryan & Haslam, 2005), public K-12 school boards (Smith, 2015), and public service (Smith & Monoghan, 2013). However, there is qualitative but not quantitative evidence for the GCP in college and university leadership (Acker & Millerson, 2018; Morely, 2014; Peterson, 2016). This leaves female leaders in colleges and universities with few measurable tools to determine how risky a new leadership opportunity could be. This paper, therefore, will review the evidence for and against the GCP and quantitatively test a variable of risk to see if a GCP tool could exist for female leaders in colleges and universities.

Glass Cliff Phenomenon

The GCP finds that female leaders are more likely to be hired at a financially unstable institution and, thus, "preferentially placed in leadership roles that are associated with an increased risk of negative consequences" (Ryan & Haslam, 2005, p. 83). Male leaders are more likely to be hired into well-resourced companies and, thus, do not face such career risks as female leaders. Morgenroth et al. (2020) used a meta-analysis of all available quantitative studies on the GCP and found support for the GCP: that female leaders were more often hired than male leaders during company crises. Thus, the career risks of being fired are more significant for female leaders than male leaders. This career risk also perpetuates the false stereotype that women are not qualified, capable leaders (Manzi & Heilman, 2021), a risk hidden behind sexist structural and cultural barriers (Ryan et al., 2016; Ryan & Haslam, 2007).

Thus, female leaders are forced to choose from positions at financially risky companies (Darouei & Pluut, 2018). The literature identifies female leaders as cliff climbers and cliff dwellers, as some female leaders identify those risky opportunities as a workplace advancement strategy (Glass & Cook, 2020). Additionally, Ryan et al. (2016) suggest that white male leaders typically don't have to take risk-taking strategies to succeed in the workplace as they are often offered such positions more readily when compared to women. However, female leaders may be more apt to engage in risk-taking strategies to change the trajectory of the institution. Or, unlike their male counterparts, they may not have sufficient resources and workplace support to enable the success of their leadership decisions (Glass & Cook, 2020).

Qualitative studies on the GCP in colleges and universities exist (Acker & Millerson, 2018; Morely, 2014; Peterson, 2016). Female leaders describe their roles as inherently perilous with a higher workload, increasing and wide-ranging managerial requirements, loss of research productivity, less prestige, and heightened role conflict (Peterson, 2016). These reports indicate that career risk is inherent in these roles, which suggests women are more likely to be hired to fill them, as male leaders are generally taking roles with such career risks (Ryan et al., 2016).

Female Leaders in Colleges and Universities

Even though American women have higher rates of attainment for bachelor's degrees (Day, 2021) and workforce participation (Matias, 2019) than American men, American women hold a minority role in leadership roles in most fields, including American colleges and universities (Johnson, 2017; Parker, 2015). While the percentage of American women working in college or university leadership roles has increased in recent decades, progress is slow and often concentrated in less prestigious institutions (Johnson, 2017; Rennison & Bonomi, 2020), such as two-year institutions (Johnson, 2017; The Chronicle of Higher Education, 2015; Ward & Wolf-Wendel, 2017). This indicates the presence of systematic barriers to advancement for female leaders (Burkinshaw et. al., 2018).

American colleges and universities are facing many financial challenges, including a demographic cliff for traditionally aged students, inconsistent funding from governmental agencies, and public pressure for additional services for a wider variety of students (Bastedo et al., 2016; Brint, 2019; Bok, 2013; Hamilton et al., 2018; McCafferey, 2019). Such challenges have led to the closures of colleges and universities. Colston et al. (2020) identified more than 300 closures in a nine-year period, which affected approximately 500,000 students. Given these financial risks to the field, it is vital to look for quantitative data to identify if and where the GCP occurs.

Risk

Risk can be operationally defined in many ways. Ryan and Haslam (2005) reviewed British board members of the Financial Times Stock Exchange (FTSE) 100 companies and reviewed fluctuations in monthly performance, stock price fluctuations, and stock performance. Defining risk as financial risk was adopted by similar studies (Cook & Glass, 2013; Elsaid & Ursel, 2018; Main & Gregory-Smith, 2018). Other researchers have transferred this risk-identifying methodology to industries outside of the corporate world (Smith, 2015; Smith & Monoghan, 2013).

The most encompassing measure of risk within American colleges or universities is the Financial Responsibility Composite Score (FRCS). Other standards exist, such as American credit ratings or the Council of Independent Colleges financial indicator (Kolbe & Kelchen, 2018); however, they do not encompass as many institutions as the FRCS. FRCS is created for every private college or university institution, nonprofit and for-profit, by the U.S. Department of Education. The FRCS determines the U.S. Department of Education's willingness to provide Title IV funding to such institutions, which supports most higher education budgets (U.S. Department of Education, 2020c). American public colleges or universities are exempt from this process as they have "the full faith and credit of the state or another government entity" (Emrey-Arras, 2017, p. 6). No one measure extensively evaluates public and private institutions' financial health. Determining the financial stability of colleges and universities is essential as inadequate finances are related to campus mergers and closures (Bates & Santerre, 2000; Rocha et al., 2019; Tarrant et al., 2018).

Methodology

An ex post facto, causal-comparative design was utilized to mimic the original GCP studies (Brady et al., 2011; Cook & Glass, 2013; Main & Gregory-Smith, 2018; Ryan & Haslam, 2005). Two independent variables were analyzed. The first is gender, which was operationalized as male or female as no participants in this study identified as non-binary. The second independent variable is time, measured in relation to the CEO hire at the college or university institution: three years before the hire up to three years after the hire. The dependent variable was the financial responsibility composite score (FRCS).

Research Questions and Sub-Research Questions

The overarching research question for the current study is as follows:

Is there evidence of the GCP in college or university CEO hiring when utilizing financial responsibility composite scores for institutions?

Based on the literature, there are four sub-research questions:

R₁: Do institutions with female CEOs have significantly lower financial responsibility composite scores than institutions with male CEOs?

R₂: Are there significantly more female CEOs than male CEOs in institutions with non-passing FRCS?

R₃: In line with the GCP, does gender influence institutional FRCS over time? Institutions with female CEOs are predicted to have significantly lower FRCS than institutions with male CEOs in the years before hiring.

R₄: In line with the career risk proposed in the GCP, do institutions with female CEOs have FRCS that decrease significantly over time?

Instrumentation

There is no single validated measure of GCP. Researchers have determined the GCP retroactively utilizing risk measures appropriate to the industry being measured. For example, businesses use financial indicators of risk (Brady et al., 2011; Cook & Glass, 2013; Main & Gregory-Smith, 2018; Ryan & Haslam, 2005). The complexity variable was utilized in public K-12 education leadership (Smith, 2015). The variables' visibility and complexity were the measures of risk used to evaluate the GCP in regulatory agencies (Smith & Monoghan, 2013). Regardless of the type of measure, risk is studied longitudinally over time.

FRCS is used in this study to measure financial riskiness for private American colleges and universities. Carnegie classification was collected to help create suitable matches for this experimental design. The FRCS is "a composite of three ratios derived from an institution's audited financial statements. The three ratios are a primary reserve ratio, an equity ratio, and a net income ratio. These ratios gauge the fundamental elements of the financial health of an institution" (U.S. Department of Education, 2020a, para. 1). Scores range from -1 to 3, where 1.5 and above are expected of financially responsible institutions (U.S. Department of Education, 2020a). Scores within the range of 1.0 to 1.5 require additional financial scrutiny, such as cash monitoring, but are still considered financially responsible. A score of less than 1.0 is considered not financially responsible; this often requires additional cash monitoring. The institution must secure a letter of credit if they want to continue receiving Title IV funding (U.S. Department of Education, 2020a, para. 3-4).

Data Collection and Participant Characteristics

CEOs of college or university institutions hired in the 2014-2015 academic year were the population of interest. CEO is the term that the U.S. Department of Education (2020b) uses to encompass the many terms that college or university institutions use to refer to the top executive: president, chancellor, chief administrator, interim president, or acting president. The CEO is the person the institutions identify as the chief administrator.

In the summer of 2021, data on the following variables were downloaded from the Integrated Postsecondary Education Data System (IPEDS) (U.S. Department of Education, 2020b) for all American colleges and universities in the academic year 2014-2015: location, Carnegie classification, and name of the chief administrator (n = 7688). The academic year 2014-2015 gave the most recent data for the years that overlapped with the availability of the FRCS scores, which was 2018-2019 (U.S. Department of Education, 2020a). Accounting for three years of data pre- and post-hiring years results in focusing on the 2014-2015 academic year. Then, FRCS for all years of available data were downloaded from the U.S. Department of Education (2020a). Data from institutions without FRCS, which were mainly public institutions, were removed (n = 3236).

Gender and year of hire were determined by reviewing institutional websites and publicly available documents. Gender was operationalized as pronouns, gendered titles (i.e., Sister, Father), or if unavailable, visual estimates were made based on outward gender characteristics. Orthodox rabbis of male-only rabbinical schools were identified as male. When gender, year of hire, and partial data for FRCS

2006-2018 were combined, there were 266 female CEOs and 739 male CEOs at private college or university institutions. Once complete data on FRCS for relevant hiring years was determined, 166 female CEOs had all seven years of relevant FRCS data. Male CEOs with all seven years of FRCS data were then matched using random purposive sampling. The matching variables were the year of hire and Carnegie classification (2017) of the institution hired. These two variables were chosen based on the sampling methodology used by Ryan and Haslam (2005). Ryan and Haslam (2005) identified female board hires and then randomly matched them as similar comparison males based on the business sector and hire time. The final sample included 166 female CEOs and 166 male CEOs. The minimum sample size is 100 for an independent sample *t*-test, the parametric version of the Mann-Whitney U test, with a medium effect size with a statistical power of .7 at the .05 alpha level (Gall et al., 2007); therefore, 166 is an appropriate sample size (see Table 1).

 Table 1

 Participant Demographics and Institutional Characteristics

Gender	n	Mode Carnegie Classification	Mode Sector of Institution	Mode Year of Hire	Mode FRCS for Year of Hire
Female	166	Special Focus Institution	Private not-for- profit, 4-year or above	2014	2.51
Male	166	Special Focus Institution	Private not-for- profit, 4-year or above	2014	2.43

Findings

Basic descriptive statistics were compiled to establish the sample's demographics and create the matched pairs. Before conducting the inferential statistics, the assumption of normality was tested via Kolmogorov-Smirnov and found to be significant. A ceiling effect and highly skewed data meant that no transformations, square root, log 10, or inverse could reshape the data into normality (see Table 2 for normality tests).

Table 2Kolmogorov-Smirnov Tests of Normality with Inverse Transformation

Year	Gender of CEO	K-S	n	p
3 years prior	Female	0.21	166	0.00
3 years prior	Male	0.23	166	0.00
2 years prior	Female	0.26	166	0.00
2 years prior	Male	0.19	166	0.00
1 year prior	Female	0.23	166	0.00
1 year prior	Male	0.25	166	0.00

Year of hire	Female	0.23	166	0.00
Year of hire	Male	0.20	166	0.00
1 year after	Female	0.26	166	0.00
1 year after	Male	0.16	166	0.00
2 years after	Female	0.23	166	0.00
2 years after	Male	0.20	166	0.00
3 years after	Female	0.24	166	0.00
3 years after	Male	0.22	166	0.00

Nonparametric tests were utilized since the distributions were not normal even after the inverse transformation (Warner, 2013). See Table 3 for descriptive statistics appropriate to nonparametric tests of each sample (Gibbons, 1993).

Table 3Descriptive Statistics

Year	Gender of CEO	Median Inverse FRCS	n	Interquartile Range
3 years prior	Female	0.67	166	0.44
3 years prior	Male	0.67	166	0.44
2 years prior	Female	0.77	166	0.44
2 years prior	Male	0.71	166	0.44
1 year prior	Female	0.77	166	0.44
1 year prior	Male	0.77	166	0.44
Year of hire	Female	0.71	166	0.44
Year of hire	Male	0.71	166	0.44
1 year after	Female	0.77	166	0.44
1 year after	Male	0.69	166	0.44
2 years after	Female	0.74	166	0.44
2 years after	Male	0.71	166	0.44
3 years after	Female	0.77	166	0.44
3 years after	Male	0.77	166	0.44

Results

Four sub-research questions were reviewed for global gender differences in FRCS, gender differences in FRCS due to passing status, and the GCP. Since FRCS are not normally distributed (see K-S test in the findings section), nonparametric statistics are utilized in all analyses.

Sub-Research Question 1: Global Gender Differences in FRCS

Hypothesis One: Institutions with female CEOs are predicted to have lower financial responsibility composite scores than institutions with male CEOs.

To test if there were any differences in median FRCS in the academic year 2014-2015 due to gender a Mann-Whitney U test was completed. The assumptions were met; the results are Mann-Whitney U = 13239, p = 0.532, d = -0.034. The median FRCS for institutions headed by women was 2.6 and for men were 2.5. There are no statistically significant differences in FRCS due to female or male CEOs, nor meaningful differences as the effect size was below the small level when using Cohen's classification (Warner, 2013).

Sub-Research Question 2: Gender Differences due to FRCS Passing Status

Hypothesis Two: There are significantly more female CEOs in institutions with non-passing financial responsibility composite scores.

A chi-squared test of independence was completed to test if there were any frequency differences in FRCS between the genders due to passing status one year before hiring. All assumptions were met; the results were chi-square (1) = 0.156, p = 0.693, phi = 0.022. No statistically significant differences in FRCS were due to female or male CEOs. The effect size is below the criteria for small (Warner, 2013), suggesting no meaningful effect.

Sub-Research Questions 3 and 4: GCP

Hypothesis Three: In line with the GCP, gender will influence FRCS over time. Institutions with female CEOs will have significantly lower FRCS than institutions with male CEOs in the years before hiring.

To see if gender differences in FRCS exist before hiring, two Friedman tests were used, one for each gender. After establishing that all assumptions were met, the first Friedman test focused on female CEOs (n = 166) across all seven years. The Friedman test was non-significant (Chi-square (6) = 7.966, p = .241). FRCS scores did not significantly vary in the three years before hiring, during the year of hire, or in the three years after hiring. With nonsignificant results, no post hoc tests were conducted. See Table 4 for descriptive statistics.

A second Friedman test was conducted using male CEOs with seven conditions (n = 166). This Friedman test was also non-significant, Chi-square (6) = 7.82, p = .25. FRCS scores did not significantly vary in the three years before hiring, during the year of hire, or in the three years after hiring. With nonsignificant results, no post hoc tests were conducted.

Table 4 *Friedman Test Results*

Gender	FRCS Year	25th	Median	75th	n per group
Female	3 years prior	2.2	2.5	3	166
Male	3 years prior	2.2	2.5	3	166
Female	2 years prior	2.2	2.7	3	166
Male	2 years prior	2.2	2.6	3	166
Female	1 year prior	2.2	2.7	3	166
Male	1 year prior	2.2	2.7	3	166
Female	hired year	2.2	2.6	3	166
Male	hired year	2.2	2.6	3	166
Female	year after	2.2	2.7	3	166
Male	year after	2.2	2.55	3	166
Female	2 years after	2.3	2.65	3	166
Male	2 years after	2.2	2.6	3	166
Female	3 years after	2.3	2.7	3	166
Male	3 years after	2.2	2.7	3	166

Hypothesis Four: In line with the career risk proposed in the GCP, institutions with female CEOs are predicted to have financial responsibility composite scores that decrease significantly over time.

To evaluate if there were any median differences in FRCS due to the timing of hiring, a Mann-Whitney U test was performed for each possible year related to hiring. After assumption testing was met, the Mann-Whitney U test was conducted. No statistically significant differences in medians occurred in any of the years under investigation in this study. For example, a Mann-Whitney U test showed no statistically significant effect in FRCS score one year before hiring between institutions headed by a female or a male CEO (U = 13362.50, p = .62, d = 0.04). In addition, the median FRCS score was 2.7 for the female sample, which was the same for the male sample (2.7). These identical median values indicate that inverse FRCS scores did not vary significantly across genders in the year before the hire occurred. Additionally, there was no meaningful effect size (see Table 5).

Table 5

Mann Whitney U Test Results

Dependent Variable	U	p	D	Effect size label	n
FRCS 3 years prior	13769.00	.99	0.00	No effect	166
FRCS 2 years prior	12761.50	.23	0.09	No effect	166
FRCS 1 year prior	13362.50	.62	0.04	No effect	166
FRCS hired year	13209.50	.51	0.05	No effect	166
FRCS 1 year after	12339.00	.09	0.13	Small effect	166
FRCS 2 years after	13098.00	.43	0.06	No effect	166
FRCS 3 years after	12760.00	.23	0.09	No effect	166
Note: Effect size uses Cohen's D conventions (Warner, 2013)					

Discussion

This research investigated the GCP in American college and university CEOs using a quantitative approach. It was expected that female CEOs would have lower FRCS than male CEOs before, during, and after hiring. The analysis did not show statistically significant differences in FRCS for American college or university CEOs due to gender. This discrepancy between the expected and actual results will be reviewed considering the literature and theory related to the GCP. The first will be a between-group comparison examining gender differences, followed by the literature and theory related to the second hypothesis, which focuses on passing status. Lastly, gender differences within each gender will be discussed.

Research Question One: Global Gender Differences in FRCS

This research question examined between-group comparisons and gender differences in FRCS. The GCP proposes that risk measures would show gender differences (Brady et al., 2011; Elsaid & Ursel, 2018; Main & Gregory-Smith, 2018; Ryan & Haslam, 2005). Therefore, the FRCS would have been lower in similar institutions headed by female CEOs than institutions headed by male CEOs. No such differences were observed in the current study. Nevertheless, other GCP studies found inconsistent differences in risk measures and the leader's gender (Cook & Glass, 2013; Kulich et al., 2015). Cook and Glass (2013) reviewed American companies but did not find evidence of a GCP. However, Elsaid and Ursel (2018) found evidence of a GCP in North American companies when using similar risk measures. Additionally, Kulich et al. (2015) found gender differences in line with the GCP in only select conditions. Overall, there are more supportive studies of the GCP (Acker & Millerson, 2018; Brady et al., 2011; Elsaid & Ursel, 2018; Main & Gregory-Smith, 2018; Morely, 2014; Peterson, 2016; Ryan & Haslam, 2005) than those that failed to observe a GCP (Cook & Glass, 2013).

This inconsistency could be related to gender-based stereotypes that suggest women are suited for domestic or less prestigious work. Stereotyping is often unintentional, unexamined, and perpetuated in American culture. Nonetheless, such stereotyping is gender-based discrimination (Castaño et al., 2019). These stereotypes exist despite evidence that shows no gender-based difference in leadership effectiveness (Paustian-Underdahl et al., 2014). Perhaps these female CEOs act consistently with gender-based stereotyping compared to women who have not been hired as CEOs. Over the last few decades, there has been a movement to lead in a more stereotypically feminine style. Bass and Riggio (2005) proposed that leaders co-lead with workers by encouraging them to strengthen the institution collaboratively through a transformational leadership process. While male leaders can have this style, it is often used in female leadership (Bass, 1990; Eagly et al., 2003). While traditional leadership stereotyping still exists, perhaps there is enough of a shift in expectations where female leaders are expected to lead in this more feminine manner.

Alternatively, it could be those female CEOs are different from other female academic leaders in some critical way. Male leaders have created institutional systems that make it harder to be a working female (Eagly, 1987). The female CEOs in this sample have likely climbed up the academic ladder while holding most second-shift work at home (Hochschild & Machung, 2012; Wolf-Wendel et al., 2007). If any of the female CEOs are mothers, they likely have childcare responsibilities (Ciciolla & Luthar, 2019) or experienced caregiver penalties (Bear & Glick, 2016). Additionally, when women achieve CEO roles, they are often paid less than male colleagues (Hebner, et. al., 2018). Nevertheless, by being a CEO, these female leaders have not chosen part-time or flexible roles that would have provided more space for second shift work (Blair-Loy et.al., 2015). The women in this sample may be different than other women in ways that allowed them to persevere through male-created systems.

Research Question Two: Gender Differences due to FRCS Passing Status

It was predicted that colleges and universities without passing FRCS would have hired female leaders. This is a function of selection bias—a term for how institutions make biased hiring decisions. Hiring professionals unknowingly engage in selection bias when they preferentially hire male leaders when institutions are doing well and preferentially hire female leaders when institutions are not stable (Brown et al., 2011; Haslam & Ryan, 2008; Rink et al., 2013; Ryan et al., 2011; Ryan et al., 2016; Ryan & Haslam, 2007). Selection bias would have been observed if the FRCS differed before hiring; the results of this current study show no support for selection bias when looking at FRCS.

Rather than looking at the people making hiring decisions, it may be more important to look at the people applying to the leadership positions. In the current study, all female CEOs in private colleges and universities resulted in a unique sample type. Female CEOs may be adapting to society's leadership expectations by having a non-existent or easily breakable psychological glass ceiling. A psychological glass ceiling is an "unwillingness to appear assertive; undervaluation of one's abilities" (Diehl & Dzubinski, 2016, p. 192). For example, in Diehl and Dzubinski's (2016) work, a high-level female employee was asked by the board of her company to lead as the CEO, and she said she was not prepared to do so and was completely caught off guard (Diehl & Dzubinski, 2016). This lack of self-awareness of one's skills set is partly due to a sense that women know that glass ceilings exist and often don't consider themselves prepared for top leadership roles even when they have the background to do so. This is a typical response; many female leaders report a lack of preparedness for their leadership positions (Morris & Laipple, 2015). Perhaps female chief administrators of college or university institutions have different attitudes about their glass ceilings than non-chief administrational women.

Lastly, it could be that institutions that are not part of the current study—that is, public institutions or institutions that women do not often lead—have gender differences due to risk. Most colleges and universities are male-created environments where agentic management expectations may still be present (Burkinshaw & White, 2017; Koot, 2004; Leathwood, 2005; Rennion & Bonomi, 2020; Rindfleish & Sheridan, 2003). Agentic leadership practices may prevent advancing, leaving women who can conform and thrive in agentic environments. Some studies show that female leaders have distinctive personality traits that make them especially well-suited to leadership (Isaacs, 2014; O'Connor, 2018). These personality traits may cause the female leaders to be more like the male leaders. Women who make it to the highest leadership positions in private colleges may not represent their gender well.

Research Questions Three and Four: GCP

The current study expected that FRCS would have been lower for institutions that hired female CEOs than institutions that hired male CEOs for a year before the hiring. Additionally, it was expected that the FRCS would remain low for these institutions. However, results showed a consistent pattern of stability in FRCS for institutions headed by both genders. Both male and female CEOs led institutions that had stable FRCS. This stability in FRCS contradicts many GCP studies (Brady et al., 2011; Elsaid & Ursel, 2018; Main & Gregory-Smith, 2018; Ryan & Haslam, 2005); however, it is like one study that did not find a GCP (Cook & Glass, 2013).

This stability may be due to how the current study operationally defined risk. Studies on the GCP measure risk in many ways, but the method is in line with how the industry defines risk: publicly traded companies often evaluate financial indicators of risk (Cook & Glass, 2013; Elsaid & Ursel, 2018; Main & Gregory-Smith, 2018; Ryan & Haslam, 2005), a wider variety of needs of students in K-12 school boards (Smith, 2015), and visibility and complexity in nonprofits (Smith & Monoghan, 2013). However, in American colleges and universities, no one measure exists. The FRCS was chosen as it is the most comprehensive measure. Other methods of measuring financial risk exist, including credit ratings such as Moody's (2021) and the Council of Independent Colleges' financial indicator (Kolbe & Kelchen, 2018). Still, they evaluate a smaller number of institutions.

The discrepancy between qualitative and quantitative evidence

The lack of quantitative evidence for the GCP in the current study contradicts current qualitative studies on GCP in college or university leaders (Acker & Millerson, 2018; Morely, 2014; Peterson, 2016). This could stem from sampling differences. Acker and Millerson (2018) and Peterson (2016) interviewed women in administrative positions from all higher education levels, whereas the current quantitative study investigated only chief executives. Perhaps female lower-level leaders see and feel the GCP themes, but those in higher-level positions do not. This would suggest those female chief administrators may be different from other female leaders on campus. Those differences, however, have not yet been explored.

The main impetus of this study is Ryan et al. (2016)'s call to test the GCP in different environments using alternative variables. This current study adds to the body of literature on the GCP. Finding that FRCS failed to detect the GCP in college or university CEOs is essential as it posits an additional career realm where there is no evidence of the GCP. Future researchers can use other variables than the FRCS to measure the potential occurrences in American higher education leadership. Additionally, this study created a methodology that mimics that of Ryan and Haslam (2005) for testing GCP in college or university presidential hiring that can be replicated for future studies.

Limitations

The main limitation of an ex post facto, causal-comparative design to internal validity is not controlling for confounding variables (Gall et al., 2007). Methodological controls taken to reduce this threat were analogous variables to the original Ryan and Haslam (2005) study based on the literature. The matching procedure controlled for school type and year of hire via the sampling matching procedure. Future experimental studies should be conducted to see if such limitations are real: principal recommendations include checking for the gender of the preceding leader, using a different measure of risk, and examining the data using an intersectional lens. Female leaders are hired more often after an internally created crisis occurs under male leadership (Kulich et al., 2015; Ryan et al., 2016). As women are stereotypically thought of as relational leaders, they are hired for their emotional stamina to bear the problem (Ryan et al., 2011). Collecting data on colleges and universities with internally created crises and examining the gender of the outgoing and incoming chief administrators could be an alternative method of investigating the GCP, like the methodology used by Brady (2011).

Additionally, an intersectional lens is useful for studying this phenomenon. For example, African American chief administrators make up 8% of all roles whereas White chief administrators make up 83% (Espinosa et al., 2017). African American women report experiencing specific barriers to advancement that are uniquely different than those experienced by African Americans or women, separately (Townsend, 2021). Quantitative data backs this up; Hebner et al. (2018) found that nonwhite female chief executives earn the least out of the following groups: nonwhite male executives, white female executives, and white male executives. In short, there is much room for additional research into the GCP in American college and university leadership.

This study examined whether evidence of the GCP in college or university CEO hiring exists when utilizing financial responsibility composite scores for academic institutions. While no statistically significant indicator of the existence of GCP was found in the current study, the study contributes to the body of knowledge given the dearth of studies on GCP in academic institutions. To appropriately identify the level of risk associated with accepting leadership positions at institutions with low FRCS, other measures may need to be explored. Importantly, the findings of the current study suggest that factors other than GCP impact the equitable representation of women in leadership roles at academic institutions.

References

- Acker, S., & Millerson, D. (2018). Leading the academic department: A mother–daughter story. *Education Sciences*, 8(2), 1-24.
- Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, *18*(3), 19–31. https://doi.org/10.1016/0090-2616(90)90061-S
- Bass, B. M., & Riggio, R. E. (2005). Transformational leadership. Lawrence Erlbaum Associates, Publishers.
- Bastedo, M. N., Altbach, P. G., & Gumport, P. J. (2016). *American college or university in the twenty-first century*. John Hopkins University Press.
- Bates, L. J., & Santerre, R. E. (2000). A time series analysis of private college closures and mergers. *Review of Industrial Organization*, *17*, 267-276. https://doi.org/10.1023/A:1007898402967
- Bear, J. B., & Glick, P. (2016). Breadwinner bonus and caregiver penalty in workplace rewards for men and women. *Social Psychological and Personality Science, 8*(7), 780–788. https://doi.org/10.1177/1948550616683016
- Becker, B. J. (1986). Influence again: Another look at studies of gender differences in social influence. In J. S. Hyde & M. C. Linn (Eds.), *The psychology of gender: Advances through meta-analysis* (pp. 178-209). Johns Hopkins University Press.
- Blair-Loy, M., Hochschild, A., Pugh, A. J., Williams, J.C. & Hartmann, H. (2015). Stability and transformation in gender, work, and family: Insights from the second shift for the next quarter century. *Community, Work & Family, 18*(4), 435-454, https://doi.org/10.1080/13668803.2015.1080664
- Bok, D. (2013). Higher Education in America. Princeton University Press.
- Brady, D., Isaacs, K., Reeves, M., Burroway, R., & Reyonolds, M. (2011). Sector, size, stability, and scandal. Explaining the presence of female executives in Fortune 500 firms. *Gender in Management: An International Journal, 26*(1), 84-104. https://www.emerald.com/insight/content/doi/10.1108/1754241111110932
- Brint, S. (2019). Two cheers for college or university: Why American universities are stronger than everand how to meet the challenges they face. Princeton University Press.
- Brown, E. R., Diekman, A. B., & Schneider, M. C. (2011). A change will do us good: Threats diminish typical preferences for male leaders. *Personality and Social Psychology Bulletin, 37*, 930–941. https://doi.org/10.1177/0146167211403322.
- Burkinshaw, P., Cahill, J., & Ford, J. (2018). Empirical evidence illuminating gendered regimes in U.K. college or university: Developing a new conceptual framework. *Education Science*, 8(2), 1-19. https://doi.org/10.3390/educsci8020081
- Burkinshaw, P., & White, K. (2017). Fixing the women or fixing universities: Women in HE leadership. *Administrative Sciences*, 7(30), 1-14. https://doi.org/10.3390/admsci7030030
- Carnegie Classifications. (2017). Basic classification description. https://carnegieclassifications.iu.edu/classification descriptions/basic.php
- Castaño, A. M., Fontanil, Y., & García-Izquierdo, A. L. (2019). "Why can't I become a manager?" A systematic review of gender stereotypes and organizational discrimination. *International Journal*

- of Environmental Research and Public Health, 16(10), 1-29. https://doi.org/10.3390/ijerph16101813
- Ciciolla, L. & Luthar, S. S. (2019). Invisible household labor and ramifications for adjustment: Mothers as captains of households. *Sex Roles, 81*, 467-486. https://doi.org/10.1007/s11199-018-1001-x
- Colston, J. Fowler, G., Laitinen, A., McCann, C., Studley, J., Tandberg, D., & Weeden, D. (2020). Anticipating and managing precipitous college closures. *New America*. https://www.newAmerica.org/education-policy/reports/anticipating-and-managing-precipitous-college-closures/#authors
- Cook, A., & Glass, C. (2013). Above the glass ceiling: When are women and racial/ethnic minorities promoted to CEO? *Strategic Management Journal*, *35*(7), 1080-1089. https://doi.org/10.1002/smj.2161
- Curtis, J. W. (2010). Faculty salary equity: Still a gender gap? *On Campus with Women, 39*. http://archive.aacu.org/ocww/volume39_1/feature.cfm?section=2
- Darouei, M., & Pluut, H. (2018). The paradox of being on the glass cliff: Why do women accept risky leadership positions? *Career Development International, 23*(4), 397-426. https://doi.org/10.1108/CDI-01-2018-0024
- Day, J. C. (2021). College degree widens gender earnings gap. *Census Bureau's Communications*. https://www.census.gov/library/stories/2019/05/college-degree-widens-gender-earnings-gap.html
- Diehl, A. B., & Dzubinski, L. M. (2016). Making the invisible visible: A cross-sector analysis of gender-based leadership barriers. *Human Resource Development Quarterly, 27*(2), 181-206. https://doi.org/10.1002/hrdq
- Eagly, A. H. (1987). Sex differences in social behavior: A social-role interpretation. Lawrence Erlbaum Associates, Inc.
- Eagly, A. H., Johnannesen-Schmidt, M. C., van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 129(4), 569-591. https://doi.org/10.1037/0033-2909.129.4.569
- Eagly, A. H., & Wood, W. (1985). Gender and influenceability: Stereotype versus behavior. In V. E. O'Leary, R. K. Unger, & B. S. Wallston (Eds.), *Women, gender, and social psychology* (pp. 225-256). Lawrence Erlbaum Associates.
- Elsaid, E., & Ursel, N. D. (2018). Re-examining the glass cliff hypothesis using survival analysis: The case of female CEO tenure. *British Journal of Management, 29*(1), 156–170. https://doi.org/10.1111/1467-8551.12241
- Emrey-Arras, M. (2017). Education should address oversight and communication gaps in its monitoring of the financial condition of schools. *AMERICA Government Accountability Office*. (Report number GAO-17-555).
- Espinosa, L.L., Turk, J. M., Taylor, M., & Chessman, H.M. (2017). Race and Ethnicity in Higher Education: A Status Report (Ch. 10). In Race and Ethnicity in Higher Education: A Status Report. American Council on Education. https://lxfsu31b52d33idlp13twtos-wpengine.netdna-ssl.com/wp-content/uploads/2019/02/REHE-Chapter-10-SA.pdf

- Gall, M. D., Gall, J. P., & Borg, W. R. (2007). Educational Research [8th ed.]. Pearson.
- Gibbons, J. D. (1993). Location tests and confidence intervals for two independent samples (mann-whitney-wilcoxon test). In *Nonparametric statistics* (pp. 31-42). SAGE Publications, Inc.
- Glass, C., & Cook, A. (2020). Pathways to the Glass Cliff: A risk tax for women and minority leaders? *Social Problems*, 0, 1–17. https://doi.org/10.1093/socpro/spz045
- Goldin, C., & Katz, L. F. (1999). The shaping of college or university: The formative years in the United States, 1890 to 1940. *Journal of Economic Perspectives, 13*(1), 37–62. https://doi.org/10.1257/jep.13.1.37
- Hamilton, B. E., Martin, J. A., Osterman, M. J. K., Driscoll, A. K., & Rossen, L. M. (2018). Births: Provisional data for 2017. *Vital Statistics Rapid Release, 4,* 1-23. https://www.cdc.gov/nchs/data/vsrr/report004.pdf
- Haslam, S. A., & Ryan, M. K. (2008). The road to the glass cliff: Differences in the perceived suitability of men and women for leadership positions in succeeding and failing organizations. *The Leadership Quarterly*, 19(5), 530–546. https://doi.org/10.1016/j.leaqua.2008.07.011
- Hebner, O. B., Collins, C. A., & Mixon, F. G. (2018). Do gender and race play a role in the compensation of university chief administrators? Evidence from institution-level panel data. *Australian Journal of Labour Economics*, 21(1), 1–21. https://doi.org/2245672258
- Hochschild, A. R. & Machung, A. (2012). The second shift. Penguin Books.
- Isaacs, A. J. (2014). Gender differences in resilience of academic deans. *Journal of Research in Education,* 24(1), 112-119. https://files.eric.ed.gov/fulltext/EJ1098305.pdf
- Johnson, H. L. (2017). *Pipelines, pathways, and institutional leadership: An update on the status of women in college or university*. American Council on Education. https://www.acenet.edu/Documents/HES-Pipelines-Pathways-and-Institutional-Leadership-2017.pdf
- Kolbe, T., & Kelchen, R. (2018). Identifying New Metrics Using IPEDS Finance Data. *National Postsecondary Education*Cooperative. https://nces.ed.gov/ipeds/pdf/npec/data/NPEC_Paper_New_IPEDS_Finance_Metrics_2017.pdf
- Koot, L. (2004). Women and leadership in universities: A case study of women academic managers. The International Journal of Public Sector Management, 17(6) 470-485. https://doi.org/10.1108/09513550410554760
- Kulich, C., Lorenzi-Cioldi, F., lacoviello, V., Faniko, K., & Ryan, M. K. (2015). Signaling change during a crisis: Refining conditions for the glass cliff. Journal of Experimental Social Psychology, 61, 96–103. https://doi.org/10.1016/j.jesp.2015.07.002
- Leathwood, C. (2005). 'Treat me as a human being—don't look at me as a woman': Femininities and professional identities in further education. Gender and Education, 17(4), 387-409. https://doi.org/10.1080/09540250500145221
- Main, B. G. M., & Gregory-Smith, I. (2018). Symbolic management and the glass cliff: Evidence from the boardroom careers of female and male directors. British Journal of Management, 29, 136-155. https://doi.org/10.1111/1467-8551.12208

- Manfredi, S., Clayton-hathway, K., & Cousens, E. (2019). Increasing gender diversity in college or university leadership: The role of executive search firms. Social Sciences, 8(6), 168. https://doi.org/10.3390/socsci8060168
- Manzi, F., & Heilman, M. E. (2021). Breaking the glass ceiling: for one and all? Journal of Personality and Social Psychology: Attitudes and Social Cognition, 120(2), 257-277. http://dx.doi.org/10.1037/pspa0000260
- Matias, D. (2019, June 20). New report says women will soon be majority of college-educated U.S. workers. NPR. https://www.npr.org/2019/06/20/734408574/new-report-says-college-educated-women-will-soon-make-up-majority-of-u-s-labor-f
- McCafferey, P. (2019). The college or university manager's handbook: Effective leadership and management in universities and colleges. Routledge.
- Moody's. (2021). College or university & not-for-profit organizations United States. https://www.moodys.com/researchandratings/market-segment/u-s-public-finance/higher-education-not-for-profit-organizations/005003002/042086
- Morely, L. (2014). Lost leaders: Women in the global academy. *College or university Research and Development*, *33*(1), 114-128.
- Morgenroth, T., Kirby, T. A., Ryan, M. K., & Sudkämper, A. (2020). The who, when, and why of the glass cliff phenomenon: A meta-analysis of appointments to precarious leadership positions. *Psychological Bulletin*, *146*(9), 797–829. https://doi.org/10.1037/bul0000234
- Morris, T. L., & Laipple, J. S. (2015). How prepared are academic administrators? Leadership and job satisfaction within U.S. research universities. *Journal of College or university Policy and Management*, 37(2), 241–251. http://dx.doi.org/10.1080/1360080X.2015.1019125
- O'Connor, C. M. (2018). Women of vision: Understanding the ways women lead change. *Christian College or university*, 17(4), 198–214. https://doi.org/10.1080/15363759.2018.1462741
- Parker, P. (2015). The historical role of women in higher education. Administrative Issues Journal: Connecting Education, Practice, and Research, 5(1), 3-14. https://doi.org/ 10.5929/2015.5.1.1
- Paustian-Underdahl, S.C., Walker, L.S., and Woehr, D.J. (2014). Gender and perceptions of leadership effectiveness: A meta-analysis of contextual moderators. *The Journal of Applied Psychology*, *99*(6), 1129-1145. https://doi.org/10.1037/a0036751
- Peterson, H. (2016). Is managing academics "women's work"? Exploring the glass cliff in college or university management. *Educational Management, Administration, and Leadership, 44*(1), 112–127. https://doi.org/10.1177/1741143214563897
- Pew Research Center. (2015). *Women and Leadership.* https://www.pewsocialtrends.org/2015/01/14/women-and-leadership/
- Rennison, C. & Bonomi, A. (2020) Women leading change in academia: Breaking the glass ceiling, cliff, and slipper. Cognella.
- Riffle, R., Schnieder, T., Hillard, A., Polander, E., Jackson, S., DesAutels, P., and Wheatly, M. (2013). A mixed methods study of gender, STEM department climate, and workplace outcomes. *Journal of Women and Minorities in Science and Engineering*, 19(3), 227–243. https://doi.org/10.1615/JWomenMinorScienEng.2013005743

- Rindfleish, J., & Sheridan, A. (2003). No change from within: Senior women managers' response to gendered organizational structures. *Women in Management Review, 18*(6), 299-310. https://doi.org/10.1108/09649420310491477
- Rink, F., Ryan, M. K., & Stocker, J. I. (2013). Social resources at a time of crisis: How gender stereotypes inform gendered leader evaluations. *European Journal of Social Psychology, 43*, 381-392. https://doi.org/10.1002/ejsp.1954
- Rocha, V., Teixeira, P. N., Biscaia, R. (2019). Mergers in European college or university: Financial issues and multiple rationales. *College or university Policy, 32*, 185–202. https://doi.org/10.1057/s41307-017-0076-2
- Rudman, L. A., & Glick, P. (2002). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues, 57*(4), 743-762. https://doi.org/10.1111/0022-4537.00239
- Ryan, M. K. & Haslam, S. A. (2005). The glass cliff: Evidence that women are over-represented in precarious leadership positions. *British Journal of Management, 16*(2), 81-90. https://doi.org/10.1111/j.1467-8551.2005.00433.x
- Ryan, M. K. & Haslam, S. A. (2007). The glass cliff: Exploring the dynamics surrounding the appointment of women to precarious leadership positions. *Academy of Management Review, 32*(2), 549–572. https://doi.org/10.2307/20159315
- Ryan, M. K., Haslam, S. A., Hersby, M. D., & Bongiorno, R. (2011). Think crisis—think female: The glass cliff and contextual variation in the think manager—think male stereotype. *Journal of Applied Psychology*, *96*(3), 470–484. https://psycnet.apa.org/doi/10.1037/a0022133
- Ryan, M. K., Haslam, S. A., Morgenroth, T., Rink, F., Stoker, J., & Peters, K. (2016). Getting on top of the glass cliff: Reviewing a decade of evidence, explanations, and impact. *Leadership Quarterly*, *27*(3), 446-455. https://doi.org/10.1016/j.leaqua.2015.10.008
- Shepherd, S. (2017). Why are there so few female leaders in college or university: A case of structure or agency? *Management in Education*, *31*(2), 82–87. https://doi.org/10.1177/0892020617696631
- Smith, A. E. (2015). On the edge of a glass cliff: Women in leadership in public organizations. *Public Administration Quarterly*, *39*(3), 484-517. https://www.jstor.org/stable/24773425
- Smith, A. E., & Monaghan, K. R. (2013). Some ceilings have more cracks: Representative bureaucracy in federal regulatory agencies. *The American Review of Public Administration, 43*(1), 50–71. https://doi.org/10.1177%2F0275074011420997
- Tarrant, M., Bray, N., & Katsinas, S. (2018). The invisible colleges revisited: An empirical review. *The Journal of College or university, 89*(3), 341-367. https://doi.org/10.1080/00221546.2017.1390971
- The Chronicle of Higher Education. (2015). Almanac of college or university. *The Chronicle of College or university, LXI* (43), 1-100. https://www.chronicle.com/package/the-almanac-of-higher-education-2015-16/
- Townsend, C. V. (2021). Identity politics: Why African American women are missing in administrative leadership in public higher education. *Educational Management, Administration, and Leadership,* 49(4), 584–600. https://doi.org/10.1177/1741143220935455
- U.S. Department of Education. (2020a). *Financial responsibility composite scores* [Data set]. https://studentaid.gov/data-center/school/composite-scores

- U.S. Department of Education (2020b). *Database of accredited postsecondary institutions and programs* [Data set]. https://ope.ed.gov/dapip/#/home
- U.S. Department of Education (2020c). *Title IV program volume reports*. https://studentaid.gov/data-center/student/title-iv
- Ward, K. and Wolf-Wendel, L. (2017). "Good" places to work: Women faculty, community colleges, academic work, and family integration. *New Directions for Community Colleges, 179*, 47-58. https://doi.org/10.1002/cc.20261
- Warner, R. M. (2013). *Applied statistics: From bivariate through multivariate techniques* (2nd ed.). Sage Publications.
- Wolf-Wendel, L., Ward, K., & Twombly, S. B. (2007). Faculty life at community colleges: The perspective of women with children. *Community College Review*, 34(4), 255-281. https://doi.org/10.1177%2F0091552107300282

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