

# The Role of Gender in Transformational Information Technology Leadership: Extending the Glass-Cliff Theory

**Ugur Yeliz Eseryel**  
*East Carolina University*

**Christopher Furner**  
*East Carolina University*

**Deniz Eseryel**  
*North Carolina State University*

**Ayşın Paşamehmetoğlu**  
*Özyeğin Üniversitesi, İstanbul, TR*

**Brenda Killingsworth**  
*East Carolina University*

**April Reed**  
*East Carolina University*

**Anna Johnson**  
*East Carolina University*

**Asligul Erkan-Barlow**  
*East Carolina University*

The glass cliff phenomenon refers to a tendency to appoint women to leadership positions when organizational performance is declining, often resulting in lower levels of female leader success. This phenomenon is well documented in management literature, however, the social and psychological mechanisms that lead to these appointments are still poorly understood and have not been investigated in the Information Technology (IT) field. Therefore, this study fills a gap in the literature by developing a model of predicted IT leadership success and predicted transformational IT leadership. Results of a scenario-based experiment indicate that expectations tend to be higher for female candidates. Additionally, when members of a leader hiring team score higher in terms of sexism, they tend to rate transformational information technology (IT) leadership of female leaders higher. This may explain the glass cliff phenomenon since transformational IT leaders are believed to be better suited to turning around poor-performing teams. Implications of gender for IT researchers, hiring teams, and leader evaluation boards are discussed.

*Keywords:* Transformational IT leadership, leader gender, IT leadership success, organizational performance, women in IT

## Introduction

Individuals' career advancement and leadership opportunities are visibly and significantly influenced by their gender (for a comprehensive review, see Lindqvist et al., 2021). Management literature suggests that among the individuals whose assigned gender at birth corresponds to their self-defined gender identity (i.e., cisgender individuals), women were more disadvantaged than men, even when their capabilities are similar (Khushk et al., 2023; Koburtay et al., 2019; Lindqvist et al., 2021; Shen & Joseph, 2021). This article investigates the current situation that cisgender women face as a minority group compared to cisgender men within the context of leadership in the Information Technology (IT) field. Even though the glass ceiling is more permeable than in the past, female leaders are still held to different standards and expectations than their male counterparts (Rudman et al., 2012). Several years ago, psychologists identified a newer form of discrimination called glass cliff (Ryan et al., 2007). Glass cliff suggests that females are preferred for leadership positions in high-risk, precarious situations. Coincidentally, when companies are geared toward success, male leaders are more likely to be chosen for leadership positions. While the glass ceiling has become more permeable over the last few years, female leaders are still held to different standards and expectations than male leaders. Glass cliff has adverse outcomes for both the women who are Information Technology (IT) leaders, in general, and those who were put into high-risk positions. Female IS leaders taking on risky leadership positions are more likely to fail due to the increased riskiness of the endeavor. Consequently, their reputations and leadership careers may be impacted negatively and irrevocably (Ryan et al., 2007). Furthermore, such leadership failures may be generalized and impact the employment of women overall by creating a negative stereotype of female IT leaders. Therefore, it is crucial to understand and overcome the glass cliff phenomenon within the IT profession. This phenomenon is particularly salient, since it may manifest due to the perceivers' sexist attitudes (Acar & Sumer, 2018). For simplicity, hereafter, the discussion of the IT profession includes the information systems field.

Sexist attitudes are likely to exist in the historically male-dominated IT profession which also tends to have a masculine organizational culture (Kirton & Robertson, 2018). Lawler and Molluzzo (2016) conducted a study of Information Systems students at their university and found that female students, in particular, were aware of sexism in their field, which also led to bullying. Their research showed that Information Systems and Computer Science students are “essentially knowledgeable of

bullying as a concern in [the] industry” (Lawler & Molluzzo, 2016, p. 137). Not only can sexism affect female leaders, but it can also affect work quality in that it can “constrain the morale and the performance of professionals” (Lawler & Molluzzo, 2016, p. 137). The researchers concluded there was enough concern to suggest that programs prepare students for this eventuality before entering the profession. Other studies identified a need to understand and reduce the gender gap in the profession through approaches like understanding barriers, i.e., the lack of access to technology education in high school (Reid et al., 2010).

Empirical studies of the glass cliff phenomenon have demonstrated contradictory results (Ryan et al., 2016). In responding to criticism regarding the glass cliff phenomenon, the authors who coined the term suggest that the phenomenon is nuanced and context-dependent (Ryan et al., 2016, p. 449). However, a literature review identified a gap in this research area and highlighted the need to understand the different contexts in which it occurs (Ryan et al., 2016). In this study, we investigate the psychological and social drivers of the glass cliff phenomenon and its impact on the IT profession. This study also employs a conceptualization of transformational leadership that was developed for the IT field, which is characterized by a culture of innovation and constant change. Specifically, this study investigates the influence of a leader's gender on perceptions of the degree of transformational IT leadership associated with the leader, and how the sexism of the perceiver influences this relationship. We also investigate whether a leader's gender influences predicted success of the organization that they lead. Therefore, we pose the following research question:

RQ. How does a leader’s gender influence perceptions of transformational IT leadership and predicted organizational success?

This study seeks to contribute to the glass-cliff paradigm by (1) testing this phenomenon within the Information Systems field and (2) examining the impact of the glass-cliff phenomenon on perceptions of transformational IT leadership. The findings augment the understanding of the mechanisms that drive the glass cliff phenomenon and should carry implications for leader selection teams seeking to avoid bias in their hiring decisions. This study also contributes to the Information Systems literature by introducing the impact of the glass-cliff phenomenon. It also enhances studies on gender-related issues in IS research that promote women's participation both in the IS field and especially in IS leadership. The practical contribution of this study includes eliciting factors that increase bias in IT-related hiring decisions. This would allow executives and hiring staff to increase their awareness and take action to eliminate such bias.

Findings that performance expectations tend to be higher for female candidates are consistent with the glass cliff paradigm. Further, the finding that when members of a leader hiring team score higher in terms of sexism, they tend to rate female candidates higher in terms of transformational IT leadership represents a potential explanation of the glass cliff phenomenon, since transformational IT leaders are expected to be more effective at turning around poor-performing teams, and members of the hiring committee who score higher in sexism (and thus have stereotypical expectations regarding characteristics of female leaders) may assume that women will exhibit a transformational style of leadership (characterized by nurturing, open communication, and team building rather than inter-team competition). In addition to the implications for the glass cliff phenomenon and female leadership in the IT field, these findings have implications for hiring teams, related to the identification of implicit biases and gender-based expectations of leadership candidates. These implications may have a substantial influence on leadership candidate selection, team performance, and the career prospects for female leader candidates.

In the following section, we review relevant research on the glass cliff phenomenon, transformational leadership, organizational performance, organizational culture, and gender in the IT field, including the gender gap, masculine organizational culture, and sexism. A model of predicted transformational IT leadership and organizational performance is developed and tested using a simulation-based experiment. Results are discussed, highlighting one unexpected finding, implications, and areas for further exploration. The paper concludes by summarizing remarks.

### **Literature Review**

To answer our research question, the relevant literature on transformational leadership, the glass cliff phenomenon, and gender in the information systems field are reviewed.

#### **The Glass Cliff Phenomenon**

Borrowing the glass metaphor from the 'glass ceiling' term, Ryan and Haslam (2005) coined the term glass cliff to describe an observed tendency for women to be chosen for leadership positions during times of low performance, turbulence, crisis, or impending failure. Earlier scenario-based experiments confirmed this tendency (e.g. Mulcahy & Linehan, 2014).

Many factors are at play in the glass-cliff phenomenon. Some key drivers are selection bias based on stereotypes about women and a faulty understanding of the characteristics associated with successful emergence from crisis (Ryan et al., 2016). For instance, women tend to be perceived as communal, while men tend to be viewed as agentic (Ryan et al., 2016). Further, the common and biased beliefs about "good leadership" tend to track with stereotypes associated with masculinity (i.e., competence, independence, competitiveness), yet when performance is declining, this association no longer applies, and preference is for stereotypically feminine characteristics of nurturing, empathy, and compassion (Ryan et al., 2016), and tactfulness and a desire to avoid controversy (Morgenroth et al., 2020).

#### **Evolving Leadership Theories in the IT Field**

The information systems discipline is characterized by multiple unique factors that make traditional leadership theories less effective at explaining outcomes than in other fields (Eseryel, 2014). In addition, the dynamic nature of this field suggests that the leadership factors that influence organizational outcomes are changing, and thus require frequent attention from researchers. For example, researchers found different ways of decision-making, knowledge creation and management, politeness behaviors among members, and unique participation behaviors in certain IT-enabled organizations.

Further, many theories do not explore the characteristics of leaders that influence transformation in the technology industry, which is characterized by several distinct traits (Pittenger et al., 2022). These characteristics include a focus on innovation, a dynamic business environment, and unique supply chain characteristics (i.e., short distribution channels, and high production costs but negligible distribution costs) (Altinkemer & Guan, 2003). Several IT-based theories are developed such as the IT self-leadership (Eseryel, 2020), action-based transformational leadership theory (Eseryel & Eseryel, 2013), e-leadership (Avolio et al., 2000), functional & visionary leadership theory (Eseryel et al., 2021), and transformational IT leadership theory.

In this study, we use transformational IT leadership (Eseryel, 2020; Eseryel & Biernath, 2024) theory because it fits very well for organizations with a specific leader who tries to make an outstanding impact in the organization to transform it in a major way. Transformational IT

leadership refers to the ability of a leader to foster a culture of innovative thinking where the followers use IT to improve their work processes and outcomes.

### **The Gender Gap and the Transformational IT Leadership**

Women remain underrepresented in tech leadership positions (Atomico, 2021). The percentage of women studying IT has steadily dropped since reaching 37% in 1984 (ComputerScience.org, 2022) and is now only 18.7% (NSF, 2019). McCain (2022) reported that women comprise only 19% of senior vice president positions and 15% of CEO positions in the tech industry.

Many factors that influence the low representation of women in tech have not changed over the years - the education pipeline, recruitment, hiring, pay equity, promotion, and retention of women are still prevalent concerns in the tech industry today (Deloitte, 2021). Lamar and Shaikh (2020) note that the top three barriers reported by women that prevent them from moving into leadership positions in the tech industry are gender bias (21%), followed by work/life integration (16%), and lack of sponsorship (14%). Extant research identifies the need to understand and reduce the gender gap in the Information Systems field through approaches such as understanding barriers (Reid et al., 2010).

One well-documented result of the IT gender gap is a culture of sexism (Harmon & Walden, 2020). As male IT professionals work with other males, they can develop experience-based norms and expectations of what constitutes a good coworker, as these norms develop socially. The social construction of these norms is driven by interactions among mostly males. These norms may reflect masculine characteristics, and over time, a masculine, or in some cases, even sexist organizational culture may emerge.

Business literature commonly views culture as "a pattern of shared basic assumptions learned by a group and to be taught to new members as the correct way to perceive and think as it solved its problems of external adaptation and internal integration well enough to be considered valid" (Schein, 2010, p. 18). Occupational culture is defined as a unique culture related to a field, which is formed as a corollary of specific tasks and expertise (Jacks, 2012). For instance, IT professionals support technology services, including hardware and software, and bring expertise in system analysis and design, programming, database administration, project management, and technical support (Jacks & Palvia, 2014). The IT occupational culture includes technical jargon, ideation, and unique values (Jacks & Palvia, 2014). As such, the IT field has an occupational culture that is different from other business aspects (Annabi & Lebovitz, 2018), which may lead to some adverse organizational outcomes (Jacks et al., 2018).

In addition to sexism, male-dominated fields tend to be characterized by a culture of masculinity (Blondé et al., 2022). While a culture of masculinity can imply gender-differentiated roles, masculinity refers to a sense of competitiveness, individual accomplishment, and propensity to succeed in risky endeavors. Individuals who score highly in masculinity tend to seek opportunities to set themselves apart from others (Furner & George, 2012), often by taking on challenging tasks and highlighting their accomplishments relative to their peers. Individuals who report lower masculinity, on the other hand, tend to be more nurturing, supportive, and communal (Hofstede, 2011).

While a majority of gender in transformational leadership studies find that female leaders are perceived as being more transformational, Hypothesis 1 predicts that in a technologically intensive environment, a culture of masculinity will dominate, where leaders value individual achievement and measurable performance over relationship building and collaboration, and this will lead subordinates to strive to outperform each other, resulting in a competitive race to stand out. In this setting, it is

predicted that subjects will view male leaders as more masculine, fostering a sense of competition that will push employees to go beyond transactional expectations, and as such, male IT leader candidates will be perceived as more transformational.

H1: Within the IT field, male leader candidates will be perceived as higher in terms of transformational IT leadership.

### **Sexism and Perceptions of Transformational IT Leadership**

The IT field, similar to some other male-dominated fields, is characterized by a culture of sexism (Matwyshyn, 2003). Occupational terminology is rampant with sexist terms such as motherboard, grandfather, father backups, and Alexis – a female servant. IT occupational culture-related barriers that obstruct women include male-dominated environments, gender discrimination, and companies not supporting women for leadership positions (Kirton & Robertson, 2018). While women are less likely to be promoted, when they are promoted, it is at a minor step up the career ladder and often in a career path that moves them further from the core business functions (Alegria, 2019). Women continue to be underrepresented in tech leadership positions (Atomico, 2021). Similarly, benevolent sexism leads to a lack of promotion of women to jobs in which they are underrepresented (Hideg & Ferris, 2016). Therefore, we posit that sexism moderates the relationship between the leader's gender and the transformation of IT leadership perception as such:

Sexism may affect female leaders and their work quality because it can "constrain the morale and the performance of professionals" (Lawler & Molluzzo, 2016, p. 137). Sexist attitudes may be why the glass cliff phenomenon exists (Acar & Sumer, 2018). Glass Cliff refers to female executives being more likely to be appointed in high-risk situations when a firm's performance is declining (Ryan & Haslam, 2007). The already downward trajectory increases the likelihood of failure, which, in return, may negatively and permanently impact women's reputations and leadership careers (Ryan et al., 2007).

Since sexism refers to prejudice based on stereotypes, we anticipate that subjects who score higher in terms of sexism will harbor more stereotypical expectations regarding female leaders, specifically that they are nurturing, collaborative, supportive, and collegial rather than competitive. We expect that this biased view of females will lead those who score highly on the sexism scale to view female IT leader candidates as more transformative and that this will supersede the effects of masculinity described in hypothesis 1. In summary, we predict that a culture of masculinity will lead IT professionals to view male candidates as more transformative because they can foster a competitive work environment (H1). However, if the IT professional scores highly in terms of sexism, their expectations of female leaders will supersede their beliefs regarding the relationship between a competitive environment and transformational IT leadership, and they will rate female candidates as more transformational (H2).

H2: Sexist responders will rate female candidates higher in terms of transformational IT leadership.

### **Organizational Performance & Predicted IT Leadership Success**

A variety of individual organizational and environmental factors influence leadership success, and definitions of success vary depending on situational factors. For many leaders, success is determined by the financial performance of the organization.

For example, Chen et al. (2019) explored CEO transformational leadership on firm performance and examined a potential difference in the moderating role of environmental uncertainty on the relationship between transformational leadership and firm performance. They contend that high technology uncertainty and sophisticated information technology information are considered different types of environmental uncertainty, which may explain a negative influence on the relationship between transformational leadership and firm performance. They hypothesized that "technology uncertainty negatively moderates the positive effect of CTL on exploratory innovation" (Chen et al., 2019, p. 88). Although the impact of technology innovation and uncertainty were evident, this hypothesis was not supported. However, demand and technology uncertainty had a partial mediating role in the relationship between CTL and firm performance.

The relationship between leadership style and organizational performance has been studied extensively. Relevant to this study, glass cliff researchers suggest that leadership success is determined in part by organizational performance trajectory, which refers to the relative change in the entity's performance at a given point in time. Corporate performance trajectory is higher when growth has been improving until the time of measurement and lower when growth has been declining. For example, Yang et al. (2021) examined a sample of U.S. college football coaches. They found that when leaders take over high-performing organizations, if there is a decline, then the rate of performance decline is lower, suggesting a positive relationship between performance trajectory and leader success.

D'Aventi (1989) notes that managing declining firms is challenging because organizations are systems that tend to get caught in positive or negative reinforcing cycles. Hence, identifying the cycle drivers and correcting the negative drivers is complicated by social, cultural, and political factors and by the fact that the drivers are only sometimes visible to leadership. Moreover, according to D'Aventi (1989), the mechanism that drives these negative cycles also applies to positive ones. Chaganti et al. (2005, p. 133) echo this sentiment and add that an incumbent CEO must not only manage the performance trajectory of the firm but must also "address repeated transitions between performance cycles of decline, stagnation, and growth."

Consistent with the findings of several studies within the glass cliff literature and the findings of Yang et al. (2021), D'Aventi (1989), and Chaganti et al. (2005), we anticipate that when a firm is in a state of growth, expectations of leadership success for incumbent leaders will be higher than it would if the firm was in a state of decline.

H3: A positive organizational performance trajectory will increase predicted IT leadership success.

According to Jas and Skelcher (2005, p. 195), "[the] improvement of organizational performance is a major theme in contemporary debates about the governance and management of public organizations." The turnaround paradigm represents a substantial body of literature that examines the factors that influence the efforts to improve performance when organizational performance is declining. For example, Jas and Skelcher (2005) argue that in the absence of leadership capability and cognition, organizations fail to self-initiate turnaround and are at higher risk of failure. As a result, organizations in a state of performance decline will often replace leadership (Bodolica & Spraggon, 2021) to instigate substantial change that results in turnaround.

While research on leadership during periods of declining organizational performance is extensive, research on the influence of gender on leadership success is relatively limited, particularly within the context of the IT workforce. Within the glass cliff paradigm, the role of gender

expectations of leaders is well studied. However, few glass cliff studies measure performance expectations, and fewer are still conducted in an IT-intensive setting.

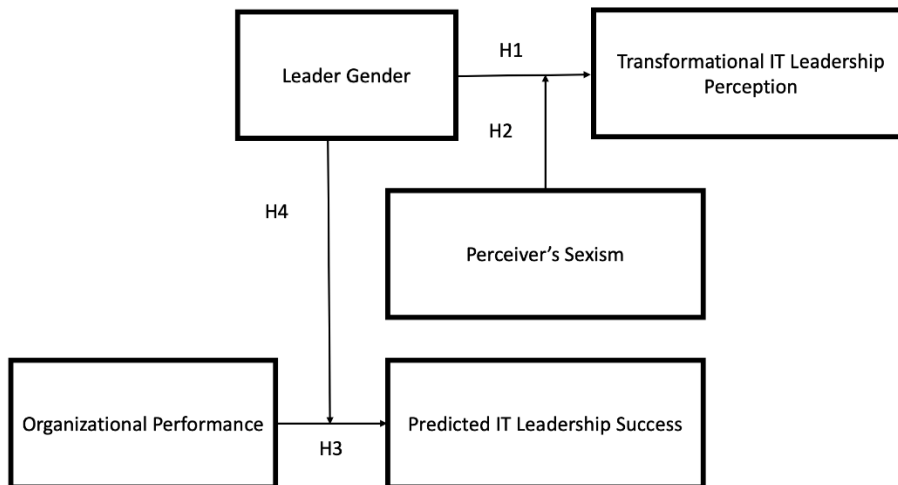
According to Morgenroth et al. (2020), a common approach to the design of glass cliff studies is to develop a quasi-experiment in which subjects are presented with two leader candidates, one male, and one female, and are presented with two firms, one that is described as doing well, and another that is depicted as being in crisis. Findings generally indicate that female candidates are preferred when the organization is in crisis (Morgenroth et al., 2020), with many researchers explaining this finding by suggesting that stereotypically feminine personality characteristics of compassion, collaboration, and communication are desirable when a substantial degree of organizational change associated with turnaround is needed.

While the focus of glass cliff literature is on the tendency to appoint female leaders to organizations in crisis, no literature was found during the conduct of this study that explores leader gender preferences when the organization is in a state of high and improving performance. Previous literature on the effect of leadership characteristics on firm performance, which were not conducted in IT work contexts, suggests that critical leadership characteristics include charisma (Awamleh & Gardner, 1999), conscientiousness (Colbert et al., 2014), strategic vision (Zaccaro & Banks, 2001), experience, emotional intelligence, and intelligence (Cavazotte et al., 2012).

Revisiting the literature on the gender gap in the IT field, which was outlined while describing hypothesis 1, it was argued that the IT field was characterized by a masculine culture driven by achievement and a focus on individual accomplishment. Suppose this masculine culture also characterizes those firms that are experiencing improving performance. In that case, it stands to reason that evaluators will expect that a leader who embodies these masculine characteristics would be best suited to continue the trajectory of performance improvement and would thus prefer a male leader candidate. In addition, the positive effect of prior leader experience on organizational performance has been demonstrated in multiple studies (Desai et al., 2016). Since the IT industry is male-dominant, likely, the number of available experienced male leaders is simply higher, leading to a tendency to select male leader candidates.

H4: Male information technology leaders will be perceived to have higher levels of IT leadership success when organizational performance is increasing.

**Figure 1 - Research Model**



## Method

To evaluate the research model, a scenario-based experiment was conducted in which subjects were asked to assume the role of a hiring professional tasked with considering applicants for a leadership position. The experiment is described in the following subsection.

### Research Design

First, a scenario-based experiment with a 2x2 factorial design (candidate sex and organizational performance trajectory) was developed. Scenario-based experiments allow researchers to examine the effects of specific manipulated factors on individual judgment and cognition while controlling for factors that are not modeled (Rungtusanatham et al., 2011). Next, a hiring scenario was developed in which subjects are asked to assume the role of a hiring professional considering applicants for a Director of Information Technology (IT) role. The subjects are provided with a job description, a one-paragraph Financial Times article about the company that indicates either declining performance or growth, and a short, half-page resume for one candidate. After reading this material, subjects were asked to predict the candidate's performance impact and to indicate their potential for transformational IT leadership. Each subject evaluated one candidate, consistent with the protocol employed by (Furner & Grubb, 2020). Subjects were also asked a series of questions related to sexism and demographic questions.

### Measures

Both organizational performance trajectory and candidate sex were manipulated during the experiment. Specifically, organizational performance trajectory (TRAJECTORY) was manipulated using a 1-paragraph Financial Times article along with a line graph, which indicated either declining (coded as 1) or increasing (coded as 2) stock performance. Candidate sex (C\_GENDER) was manipulated using resumes that included a small photo of the candidate (male is coded as 1; female is coded as 2) along with culturally traditional names that matched the sex of the candidate's photo. Manipulation checks for TRAJECTORY and C\_GENDER were also conducted. Sexism (SEXISM) was assessed using Glick and Fiske's (1997) 22-item Ambivalent Sexism Inventory, where both dimensions, hostile sexism and benevolent sexism, were included. Predicted success (SUCCESS) was measured using three questions developed for this study. More precisely, a 5-point Likert-type scale was used where 1 was "very poor," and 5 was "very good" to measure participants' responses. The questions asked were:

- (1) What do you think will be the success of this company after [candidate's name] works in this position for five years?
- (2) To what extent will [candidate's name] be able to influence the company to change in positive ways within five years?
- (3) To what extent is the success or failure of this company dependent on [candidate's name]?

Transformational IT leadership (TRANSFORM\_LEAD) was measured using Eseryel and Biernath's (2024) 22-item scale.

### Subjects

Data were collected from undergraduate student subjects at two universities, one in Turkey and one in the Netherlands. These students had an average of 5.8 months of professional work experience. Students from these two countries were chosen because they differ on Hofstede's (2011)

masculinity dimension and, as such, are expected to provide sufficient variance on the sexism variable. Participation was voluntary. Each survey was presented to the participants in their native language and included candidate profiles that provided typical names and experiences from their country. Five hundred sixty-two responses were collected, with 281 from Turkey and 281 from the Netherlands. Cases were excluded if subjects did not answer any of the analyzed questions, yielding a final usable sample of 441 subjects.

### Analysis and Results

The data were analyzed with IBM's Statistical Package for the Social Sciences (SPSS) version 26. Before testing the main effects, a manipulation check was run to ensure that subjects correctly identified the firm's performance trajectory (TRAJECTORY) and the candidate's sex (C\_GENDER). The bivariate correlation between TRAJECTORY and the corresponding manipulation check is 0.96 and was significant. Additionally, the bivariate correlation between C\_GENDER and the corresponding manipulation check was 1.00 and significant. Finally, we conducted an exploratory factor analysis (EFA) using principal components analysis with varimax rotation on the items for SEXISM, SUCCESS, AND TRANSFORM\_LEAD. Factor loadings ranged from 0.69 to 0.91 for SEXISM, from 0.48 to 0.79 for SUCCESS, and from 0.49 to 0.88 for TRANSFORM\_LEAD, indicating discriminant validity. Cronbach alphas were 0.926 for SEXISM, 0.805 for SUCCESS, and 0.943 for TRANSFORM\_LEAD. Means, standard deviations (Std. Dev.), and bivariate correlations ( $r$ ) are presented in Table 1.

Hypotheses 1 and 2 can be tested using regression analysis. Hypotheses 3 and 4 can be tested using a second regression analysis. A regression analysis was conducted to test hypotheses 1 and 2, with predicted success as the dependent variable and organizational performance trajectory and an interaction term of candidate sex multiplied by organizational performance trajectory as independent variables. The regression equation was significant ( $F(2,441) = 6.07$   $p = 0.003$ ; adj.  $R^2 = 0.027$ ).

**Table 1** - Means, Standard Deviations, and Bivariate Correlations

<b>Variables</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>r(1)</b>	<b>r(2)</b>	<b>r(3)</b>
TRAJECTORY (1)	1.52	0.50	1.00	0.05	-0.01
C_GENDER (2)	1.52	0.50	0.05	1.00	0.03
SEXISM (3)	4.05	1.20	-0.01	0.03	1.00
SUCCESS	5.45	0.94			
TRANSFORM_LEAD	5.30	0.75			
*** = $p < 0.001$ ; ** = $p < 0.050$ ; and * = $p < 0.100$					
TRAJECTORY is an indicator variable; it is equal to 1 when a participant received a declining performance scenario and 2 if given an increasing performance scenario.					
C_GENDER is an indicator variable; it is equal to 1 for male participants and equal to 2 for female participants.					
SEXISM – is a factored variable based on Glick and Fiske's (1997) 22-item Ambivalent Sexism Inventory.					
SUCCESS - is a factored variable using three items created for this study.					
TRANSFORM_LEAD – is a factored variable adapted from Podsakoff, MacKenzie, and Bommer's (1996) 22-item Transformational Leadership Behavioral Scale for use in an IT context.					

A regression analysis was conducted to test hypothesis 3, with perceived transformational IT leadership as the dependent variable and sexism and an interaction term of Candidate Sex X sexism as independent variables. The regression equation was significant ( $F(2,439) = 10.11, p < 0.001; \text{adj. } R^2 = 0.040$ ). Regression results are presented in Table 2.

**Table 2 - Results of Regression Analysis**

Dependent Var	Hypothesis	Independent Var	Beta	SE	T	Supported
TRANSFORM_LEAD	H1	GENDER	-0.21	0.10	-2.03*	Yes
	H2	SEXISM X C_GENDER	0.08	0.02	4.23**	Yes
SUCCESS	H3	TRAJECTORY	0.29	0.09	3.21**	Yes
	H4	TRAJECTORY X C_GENDER	0.13	0.40	3.21**	No
** = $p < 0.001$ ; * = $p < 0.050$						
TRAJECTORY is an indicator variable; it is equal to 1 when a participant received a declining performance scenario and 2 if given an increasing performance scenario.						
C_GENDER is an indicator variable; it is equal to 1 for male participants and equal to 2 for female participants.						
SEXISM – is a factored variable based on Glick and Fiske's (1997) 22-item Ambivalent Sexism Inventory.						
SUCCESS - is a factored variable using three items created for this study.						
TRANSFORM_LEAD – is a factored variable adapted from Podsakoff, MacKenzie, and Bommer's (1996) 22-item Transformational Leadership Behavioral Scale for use in an IT context.						

Hypothesis 1 predicted that within the IT field, male leader candidates would be rated higher in transformational IT leadership. This hypothesis was supported. Hypothesis 2 predicted that the influence of candidate sex on perceived transformational IT leadership would be different for respondents who score higher on sexism and that they would rate female candidates as higher in transformational IT leadership. This hypothesis was supported. Findings indicate that when the respondent scores higher in terms of sexism, they tend to rate female candidates higher in terms of transformational IT leadership. Hypothesis 3 predicted that when organizational performance trajectory was positive, predictions of leadership success would increase. This hypothesis was supported. Finally, Hypothesis 4 predicted that when organizational performance trajectory was positive, male leader candidates would be rated higher in terms of leadership success. This hypothesis was not supported. While a positive relationship was identified, female leader candidates were rated higher in terms of leadership success.

### Discussion

The objective of this study was to evaluate the effect of leadership candidate characteristics, including sex, on predictions of transformational IT leadership and candidate success within the context of the glass cliff paradigm. This study carries implications for researchers as well as IT professionals, particularly those involved in decisions affecting the appointment of leaders. Findings are discussed along with research implications, followed by practical implications, limitations, and opportunities for future research.

## Theoretical Contributions

Findings supported a relationship between candidate gender and perceptions of transformational leadership, in which male candidates are rated higher in terms of IT transformational leadership (H1). This finding differs from the consensus within the glass cliff paradigm, in which female leaders tend to be viewed as more capable of inspiring subordinates to go beyond their transactional obligations. This finding is attributed to differences in the culture in the IT field, which is male-dominated and tends to be masculine, thus favoring male candidates. Further findings supported an interaction between decision-maker sexism and the relationship between candidate gender and organizational performance trajectory on predicted success, in which female candidates were rated as more transformational when the respondent scored higher in terms of sexism (H2). This finding is consistent with the cultural literature on masculinity, in which individuals characterized by higher levels of masculinity not only espouse gender-based roles but also view women as more nurturing and social. In contrast, they view men as more focused on individual accomplishment (Hofstede, 2011). For the glass cliff paradigm, this implies the phenomenon in which female leaders tend to be appointed to leadership opportunities in which the odds of success are lower. It occurs partly because the people making the assignment may believe that a transformational leader would be better suited to turn around the poor-performing team. If they are sexist, they may believe that female leaders will be more successful at facilitating the transformation. While the r-squared for this regression was relatively low, the dependent variable, perceptions of transformational IT leadership are complex and nuanced, and as such a vast number of factors, including subject-level psychological factors, organizational cultural derived perceptions of leadership expectations, and many others influence this outcome. As our understanding of the factors that drive perceptions of transformational IT leadership evolves, our ability to develop models that explain the factor should improve as well. In the meantime, our findings that gender and the interaction between gender and sexism are important to our understanding of leadership in IT, given the traditional male-dominated nature of the field. While low, these r-squared values are not inconsistent with those found in other studies that have had a substantial impact on emerging paradigms (e.g., De Bondt & Thaler, 1985; Fan & Wong, 2002).

This study predicted that organizational performance trajectory would be positively associated with predicted success (H3), and evidence supports this relationship. Consequently, the findings are consistent with the premise of the glass cliff paradigm that the underlying factors that influence organizational outcomes tend to persist, which is also consistent with Yang et al. (2021), and D'Aventi (1989).

Findings did not support a moderated relationship between candidate gender and the relationship between organizational performance and perceived leadership success in which male candidates are rated higher in terms of perceived leadership success when organizational performance was higher. Rather, an interaction effect was observed in which female candidates were rated higher on perceived leadership success when organizational performance was higher. This unexpected finding might be explained by nuance in organizational leadership theory. When organizational performance is strong, transformational leadership may not be as effective as transactional leadership since maintaining the rate of performance growth is preferable to transforming or changing performance growth. This may not be the case in every industry. As Loderer et al. (2016) point out, maintaining performance growth in the IT industry is difficult because of frequent disruptions in the business environment, resulting in a situation where transformational leaders tend to outperform transactional leaders over the long term. Within the IT industry, female candidates may be rated as more apt to be successful leaders when the organization

is experiencing success because they are viewed as less assertive and thus less likely to support substantial change to operations, which may alter the organization's performance trajectory. This unexpected finding suggests that this relationship is quite nuanced and that exploration of this relationship could augment the leadership paradigm. While the r-squared for this model was relatively low, the outcome and predictions of leadership success are complex and dependent on a variety of both psychological and organizational factors. Consistent with the research objectives, the model is relatively simple and focused, and as a result, one would only expect to explain a limited proportion of the variance in this outcome. The variance explained in this model is not inconsistent with that reported by other studies that examined a relatively small factor that influenced a substantially complex outcome (Malmendier & Tate, 2005).

### **Practical Implications**

From a theoretical perspective, hypothesis 4 represents a potential explanation for the phenomenon underlying the tendency to appoint female candidates to leadership positions when the organization is in a state of performance decline. This finding also carries significant implications for hiring and appointment teams tasked with selecting leaders. Members of these teams should reflect on their personal biases regarding both men and women. This includes what they may believe are positive biases, such as women being more transformational leaders than men, before considering candidates. The implications of continuing the trend of appointing women to leadership positions of low-performing organizations have already been articulated and include substance reputation and career roadblocks, as well as a perpetuation of gender stereotypes regarding leadership.

Hypothesis 3 found that when sexism is not considered, leader gender does not significantly influence perceptions of transformational leadership. This implies that hiring/appointment teams can make decisions without gender bias if the members are not sexist. Although controversial, it may be prudent for organizations to consider asking hiring/appointment teams to screen for signs of sexism, perhaps employing a questionnaire to help identify and address biases before making decisions. However, there are challenges to this recommendation, including socially desirable reporting bias and time issues, as well as a potential loss of trust among the hiring team members.

Hypothesis 2 found that expectations of success were higher when the candidate was female. Expectation confirmation theory suggests that when expectations are higher, leaders may be evaluated using higher standards than when expectations are low. Therefore, boards of trustees and others who assess leaders should be aware of expectation/confirmation bias when evaluating leaders, particularly female leaders.

### **Limitations and Future Research**

The findings of this study advance the glass cliff paradigm; however, they are limited by the study design and sample characteristics. The most substantial determination is that the role of sexism in perceptions of transformational leadership depends on the conceptualization of sexism, which is limited by the study design in two ways. First, data were collected in Turkey and the Netherlands. These two countries were selected specifically because they are on opposite ends of the masculinity spectrum (see Hofstede, 2011). By choosing these two countries, we expected an acceptable variance on the sexism scale to facilitate analysis. However, this sample is limited, and other cultural or country-specific factors could come into play. For this reason, future studies could consider the same relationships but employ a sample from other countries, perhaps from countries that score in the middle on the masculinity dimension. This study measured sexism at the individual

level, mitigating this concern. However, more reflective samples tend to yield more generalizable results, and therefore, replication studies would be recommended as future research.

Second, the sample consisted of students. While students are prone to sexism, and our results indicated variation on the sexism scale, there is reason to believe that students are more progressive than the population at large, which may have affected our results. Further, even if the subjects were sexist, the topic of this study does lend itself to socially desirable reporting, potentially conflating the measurement of the sexism variable. Finally, beyond the measure of sexism, students are unlikely to have been involved in appointing leaders and may not fully understand organizational performance trajectory, although we did get adequate variation on this variable. As a result, future studies could seek to confirm or disprove these findings by sampling different populations, ideally those involved in leader appointment decisions.

Despite the limitations of the sample, common to many studies, our findings raise several new questions regarding the glass cliff phenomenon. First, if perceptions of transformational IT leadership combined with attitudes about women as being more transformational influence appointment decisions when performance is declining, what other leadership style perceptions might be tied to gender and come into play during leadership appointment decisions? The literature on leadership styles is vast. Researchers may consider which leadership style topologies may be influenced by gender bias and model these relationships.

From the human resources point of view, the social and psychological characteristics of hiring/appointment team members are complex. Hiring decisions are also likely influenced by various organization-specific, industry-specific, and environmental factors. By studying these factors, researchers may be able to augment our understanding of this phenomenon and hopefully mitigate its harmful effects on the careers of female IT professionals.

Finally, future research in the IT field should test our findings for cisgender women for other genders that constitute a minority. We suggest operationalizing gender as consisting of various aspects including (a) physiological/bodily aspects; (b) gender identity or self-defined gender; (c) legal gender; and (d) social gender in terms of norm-related behaviors and gender expressions following (Lindqvist et al., 2021, p. 333). Future research that enhances our understanding of the biases faced by all genders is needed to create gender equality for all. Understanding biases against various genders and creating means to eliminate gender gaps are likely to improve organizational performance and increase employee satisfaction.

## **Conclusion**

CEO replacement is common during periods of changes in organizational performance trajectory (Downes, 2019). The glass cliff phenomenon, in which female candidates tend to be appointed to teams in which performance is declining, is well documented. However, the psychological mechanisms of the members of the hiring/appointment teams that lead to this phenomenon are not. It stands to reason that these mechanisms are complex and entail many factors, and our findings suggest that those mechanisms may be industry-dependent. They likely vary substantially from team to team and depend on other organizational industry-level factors. In this study, we provide evidence to support one potential explanation: Hiring/Appointment team members believe that transformational IT leaders will be more effective at turning around poorly performing teams or organizations and that if members are sexist, they may perceive female leaders as more transformational than male leaders. While there is still much to learn about the drivers of this phenomenon, this study should constitute an essential step in understanding this phenomenon

and, through understanding, empower the mitigation of the damage that the glass cliff phenomenon has on the careers of female IT professionals.

### References

- Acar, F. P., & Sumer, H. C. (2018). Another test of gender differences in assignments to precarious leadership positions: Examining the moderating role of ambivalent sexism. *Applied Psychology: An International Review*, 67(3), 498-522. <https://doi.org/10.1111/apps.12142>
- Akerlof, G. A. (1978). The market for “lemons”: Quality uncertainty and the market mechanism. In P. Diamond & M. Rothschild (Eds.), *Uncertainty in Economics* (pp. 235-251). Academic Press. <https://doi.org/10.1016/B978-0-12-214850-7.50022-X>
- Altinkemer, K., & Guan, J. (2003). Analyzing Protection Strategies for Online Software Distribution. *J. Electron. Commer. Res.*, 4(1), 34-48.
- Annabi, H., & Lebovitz, S. (2018). Improving the retention of women in the IT workforce: An investigation of gender diversity interventions in the USA. *Information Systems Journal*, 28(6), 1049-1081. <https://doi.org/10.1111/isj.12182>
- Atomico. (2021). *The 9th annual state of European tech 21*. <https://stateofeuropeantech.com/>
- Avolio, B. J., Kahai, S., & Dodge, G. (2000). E-leadership: implications for theory, research and practice. *The Leadership Quarterly*, 11(6), 615-668.
- Awamleh, R., & Gardner, W. L. (1999). Perceptions of leader charisma and effectiveness: The effects of vision content, delivery, and organizational performance. *The Leadership Quarterly*, 10(3), 345-373. [https://doi.org/10.1016/S1048-9843\(99\)00022-3](https://doi.org/10.1016/S1048-9843(99)00022-3)
- Blondé, J., Gianettoni, L., Gross, D., & Guilley, E. (2022). Hegemonic masculinity, sexism, homophobia, and perceived discrimination in traditionally male-dominated fields of study: A study in Swiss vocational upper-secondary schools. *International Journal for Educational and Vocational Guidance*, 1-22. <https://doi.org/10.1007/s10775-022-09559-7>
- Bodolica, V., & Spraggon, M. (2021). Leadership in times of organizational decline: a literature review of antecedents, consequences and moderators. *International Journal of Organizational Analysis*, 29(2), 415-435. <https://doi.org/10.1108/IJOA-04-2020-2123>
- Bonner, N. A. (2010). Predicting leadership success in agile environments: An inquiring systems approach. *Academy of Information and Management Sciences Journal*, 13(2), 83-103.
- Bruckmüller, S., & Branscombe, N. R. (2010). The glass cliff: When and why women are selected as leaders in crisis contexts. *British Journal of Social Psychology*, 49(3), 433-451. <https://doi.org/10.1348/014466609X466594>
- Cavazotte, F., Moreno, V., & Hickmann, M. (2012). Effects of leader intelligence, personality and emotional intelligence on transformational leadership and managerial performance. *The Leadership Quarterly*, 23(3), 443-455. <https://doi.org/10.1016/j.leafqua.2011.10.003>
- Chaganti, R., Damanpour, F., & Mankelwicz, J. (2005). CEO power cycles and corporate performance cycles: An examination of the relationship between changes in power and changes in performance. In M. A. Rahim & R. T. Golembiewski (Eds.), *Current Topics in Management* (1 ed., Vol. 10, pp. 133-160). Routledge/Taylor and Francis Group. <https://doi.org/10.4324/9780203794043-8>
- Chen, J.-X., Sharma, P., Zhan, W., & Liu, L. (2019). Demystifying the impact of CEO transformational leadership on firm performance: Interactive roles of exploratory innovation and environmental uncertainty. *Journal of Business Research*, 96, 85-96. <https://doi.org/10.1016/j.jbusres.2018.10.061>

- Colbert, A. E., Barrick, M. R., & Bradley, B. H. (2014). Personality and leadership composition in top management teams: Implications for organizational effectiveness. *Personnel Psychology*, 67(2), 351-387. <https://doi.org/10.1111/peps.12036>
- ComputerScience.org. (2022, September 9). *Women in computer science*. <https://www.computerscience.org/resources/women-in-computer-science/>
- Connell, R. (2013). *Gender and power: Society, the person and sexual politics*. John Wiley and Sons.
- Crowston, K., Howison, J., Masango, C., & Eseryel, U. Y. (2007). The balancing act: The role of face-to-face meetings in technology-supported self-organizing distributed teams. *Transactions on Professional Communication*, 50(3), 185-203. <https://doi.org/10.1109/TPC.2007.902654>
- Crowston, K., Li, Q., Wei, K., Eseryel, U. Y., & Howison, J. (2007). Self-organization of teams in free/libre open source software development. *Information and Software Technology*, 49(6), 564-575. <https://doi.org/10.1016/j.infsof.2007.02.004>
- D'Aventi, R. A. (1989). The aftermath of organizational decline: A longitudinal study of the strategic and managerial characteristics of declining firms. *The Academy of Management Journal*, 32(3), 577-605. <https://doi.org/10.2307/256435>
- De Bondt, W. F., & Thaler, R. (1985). Does the stock market overreact? *The Journal of finance*, 40(3), 793-805. <https://doi.org/10.1111/j.1540-6261.1985.tb05004.x>
- Deloitte. (2021). *TMT Predictions 2022* (Deloitte Insights, Issue. Deloitte). [https://www2.deloitte.com/content/dam/insights/articles/GLOB164581\\_TMT-Predictions-2022/DI\\_TMT-predictions-2022.pdf](https://www2.deloitte.com/content/dam/insights/articles/GLOB164581_TMT-Predictions-2022/DI_TMT-predictions-2022.pdf)
- Desai, M. N., Lockett, A., & Paton, D. (2016). The effects of leader succession and prior leader experience on postsuccession organizational performance. *Human Resource Management*, 55(6), 967-984. <https://doi.org/10.1002/hrm.21700>
- Downes, M. (2019). Connecting Governance to CEO Replacement and Organizational Recovery. *Advances in Business Research*, 9(1), 64-77.
- Eden, D. (1992). Leadership and expectations: Pygmalion effects and other self-fulfilling prophecies in organizations. *The Leadership Quarterly*, 3(4), 271-305. [https://doi.org/10.1016/1048-9843\(92\)90018-B](https://doi.org/10.1016/1048-9843(92)90018-B)
- Eseryel, U. Y. (2014). IT-enabled knowledge creation for open innovation. *Journal of the Association for Information Systems*, 15(11), 805-834. <https://doi.org/10.17705/1jais.00378>
- Eseryel, U. Y. (2020). Enabling IT self-leadership in online education. *Interdisciplinary Journal of e-Skills and Lifelong Learning*, 16(123-142). <https://doi.org/10.28945/4684><https://doi.org/https://doi.org/10.28945/4684>
- Eseryel, U. Y., & Biernath, P. (2024). The influence of transformational IT leadership on the IT leadership of followers. *Journal of Leadership and Management*, 10(1), 11-29. <https://bit.ly/titl-itl>
- Eseryel, U. Y., Crowston, K., & Heckman, R. (2021). Functional and Visionary Leadership in Self-Managing Virtual Teams. *Group & Organization Management*, 46(2), 424-460. <https://doi.org/10.1177/1059601120955034>
- Eseryel, U. Y., & Eseryel, D. (2013). Action-embedded transformational leadership in self-managing global information technology teams. *The Journal of Strategic Information Systems*, 22(2), 103-120. <https://doi.org/10.1016/j.jsis.2013.02.001>
- Eseryel, U. Y., Wei, K., & Crowston, K. (2020). Decision-making processes in community-based free/libre open source software development teams with internal governance: An extension to decision-making theory. *Communications of the Association for Information Systems*, 46, 484-510, Article 20. <https://doi.org/10.17705/1CAIS.04620>

- Fan, J. P., & Wong, T. J. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of accounting and economics*, 33(3), 401-425. [https://doi.org/10.1016/S0165-4101\(02\)00047-2](https://doi.org/10.1016/S0165-4101(02)00047-2)
- Fiedler, F. E. (1992). Time-based measures of leadership experience and organizational performance: A review of research and a preliminary model. *The Leadership Quarterly*, 3(1), 5-23. [https://doi.org/10.1016/1048-9843\(92\)90003-X](https://doi.org/10.1016/1048-9843(92)90003-X)
- Furner, C. P., & George, J. F. (2012). Cultural determinants of media choice for deception. *Computers in Human Behavior*, 28(4), 1427-1438. <https://doi.org/10.1016/j.chb.2012.03.005>
- Furner, C. P., & Grubb, L. Galyani Moghaddam, G. (2010). Information technology and gender gap: Toward a global view. *The electronic library*, 28(5), 722-733. <https://doi.org/10.1108/02640471011081997>
- The influence of observable interview behaviors on the willingness to accept a job offer. *Amity Journal of Management*, 8(2), 29-39. [https://www.amity.edu/gwalior/ajm/pdf/ajm\\_v8n2.pdf](https://www.amity.edu/gwalior/ajm/pdf/ajm_v8n2.pdf)
- Glick, P., & Fiske, S. T. (1997). Hostile and benevolent sexism: Measuring ambivalent sexist attitudes toward women. *Psychology of Women Quarterly*, 21(1), 119-135. <https://doi.org/10.1111/j.1471-6402.1997.tb00104.x>
- Greer, L. L., Homan, A. C., De Hoogh, A. H. B., & Den Hartog, D. N. (2012). Tainted visions: The effect of visionary leader behaviors and leader categorization tendencies on the financial performance of ethnically diverse teams. *Journal of Applied Psychology*, 97(1), 203-213. <https://doi.org/10.1037/a0025583>
- Harmon, K. A., & Walden, E. A. (2020). Comparing three theories of the gender gap in information technology careers: The role of salience differences. *Journal of the Association for Information Systems*, 22(4), 1099-1145. <https://doi.org/10.17705/1jais.00690>
- Hickman, L., & Akdere, M. (2017). Development of effective IT leadership behaviors: A review. Twelfth Midwest Association for Information Systems Conference, Springfield, Illinois.
- Hideg, I., & Ferris, D. L. (2016). The compassionate sexist? How benevolent sexism promotes and undermines gender equality in the workplace. *Journal of Personality and Social Psychology*, 111(5), 706-727. <https://doi.org/10.1037/pspi0000072>
- Hofstede, G. (1984). *Culture's consequences : International differences in work- related values* (Vol. 5). Sage Publications, Inc.
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online readings in psychology and culture*, 2(1), 2-26, Article 8. <https://doi.org/10.9707/2307-0919.1014>
- Jacks, T. (2012). *An examination of occupational culture: Interpretation, measurement, and impact* (Publication Number 3525769) [Doctor of Philosophy, The University of North Carolina at Greensboro ProQuest Dissertations Publishing].
- Jacks, T., & Palvia, P. (2014). Measuring value dimensions of IT occupational culture: An exploratory analysis. *Information Technology and Management*, 15(1), 19-35. <https://doi.org/10.1007/s10799-013-0170-0>
- Jacks, T., Palvia, P., Iyer, L., Sarala, R., & Daynes, S. (2018). An ideology of IT occupational culture: The ASPIRE values. *Advances in Information Systems*, 49(1), 93-117. <https://doi.org/10.1145/3184444.3184451>
- Jas, P., & Skelcher, C. (2005). Performance decline and turnaround in public organizations: A theoretical and empirical analysis. *British Journal of Management*, 16(3), 195-210. <https://doi.org/10.1111/j.1467-8551.2005.00458.x>

- Khushk, A., Zengtian, Z., & Hui, Y. (2023). Role of female leadership in corporate innovation: A systematic literature review. *Gender in Management*, 38(3), 287-304. <https://doi.org/10.1108/GM-01-2022-0028>
- Kirton, G., & Robertson, M. (2018). Sustaining and advancing IT careers: Women's experiences 131 in a UK-based IT company. *The Journal of Strategic Information Systems*, 27(2), 157–169. <https://doi.org/10.1016/j.jsis.2018.01.001>
- Koburta, T., Syed, J., & Haloub, R. (2019). Congruity between the female gender role and the leader role: A literature review. *European Business Review*, 31(6), 831-848. <https://doi.org/10.1108/EBR-05-2018-0095>
- Kulich, C., Lorenzi-Cioldi, F., Iacoviello, V., Faniko, K., & Ryan, M. K. (2015). Signaling change during a crisis: Refining conditions for the glass cliff. *Journal of Experimental Social Psychology*, 61(November), 96-103. <https://doi.org/10.1016/j.jesp.2015.07.002>
- Lamar, K., & Shaikh, A. (2020, March 5, 2021). Cultivating diversity, equity, and inclusion: How CIOs recruit and retain experienced women in tech. *Deloitte Insights*. <https://www2.deloitte.com/xe/en/insights/topics/value-of-diversity-and-inclusion/diversity-and-inclusion-in-tech/recruit-and-retain-experienced-women-in-technology.html>
- Lawler, J., & Molluzzo, J. C. (2016). A perception study of computer science and information systems students on bullying prevalence in the information systems profession. *Contemporary Issues in Education Research*, 9(3), 137-144. <https://doi.org/10.19030/cier.v9i3.9709>
- Lindqvist, A., Gustafsson Senden, M., & Renstrom, E. A. (2021). What is gender anyway: A review of the options for operationalizing gender. *Psychology and Sexuality*, 12(4), 332-344. <https://doi.org/10.1080/19419899.2020.1729844>
- Loderer, C., Stulz, R., & Waelchli, U. (2016). Firm rigidities and the decline in growth opportunities. *Management Science*, 63(9), 3000-3020. <https://doi.org/10.1287/mnsc.2016.2478>
- Malmendier, U., & Tate, G. (2005). CEO Overconfidence and Corporate Investment. *The Journal of Finance*, 60(6), 2661-2700. <https://doi.org/10.1111/j.1540-6261.2005.00813.x>
- Matwysyn, A. M. (2003). Silicon ceilings: Information technology equity, the digital divide and the gender gap among information technology professionals. *Northwestern Journal of Technology and Intellectual Property*, 2(1), 35-75. <https://scholarlycommons.law.northwestern.edu/njtip/vol2/iss1/2>
- McCain, A. (2022, October 21, 2022). *40 telling women in technology statistics [2023]: Computer science gender Rratio*. Zippia. <https://www.zippia.com/advice/women-in-technology-statistics>
- 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>
- Mulcahy, M., & Linehan, C. (2014). Females and precarious board positions: Further evidence of the glass cliff. *British Journal of Management*, 25(3), 425–438. <https://doi.org/10.1111/1467-8551.12046>
- Pittenger, L. M., Berente, N., & Gaskin, J. (2022). Transformational it leaders and digital innovation: the moderating effect of formal it governance. *ACM SIGMIS Database: The DATABASE for Advances in Information Systems*, 53(1), 106-133.
- Reid, E. M., O'Neill, O. A., & Blair-Loy, M. (2018). Masculinity in male-dominated occupations: How teams, time, and tasks shape masculinity contests. *Journal of Social Issues*, 74(3), 579-606. <https://doi.org/10.1111/josi.12285>

- Reid, M. F., Allen, M. W., Armstrong, D. J., & Riemenschneider, C. K. (2010). Perspectives on challenges facing women in IS: The cognitive gender gap. *European Journal of Information Systems*, 19(5), 526-539. <https://doi.org/10.1057/ejis.2010.30>
- Riemenschneider, C. K., Armstrong, D. J., Allen, M. W., & Reid, M. F. (2006). Barriers facing women in the IT workforce. *The DATA BASE for Advances in Information Systems*, 37(4), 58–78. <https://doi.org/10.1145/1185335.1185345>
- Rudman, L. A., Moss-Racusin, C. A., Phelan, J. E., & Nauts, S. (2012). Status incongruity and backlash effects: Defending the gender hierarchy motivates prejudice against female leaders. *Journal of Experimental Social Psychology*, 48(1), 165-179. <https://doi.org/10.1016/j.jesp.2011.10.008>
- 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. *The Academy of Management Review*, 32(2), 549–572. <https://doi.org/10.5465/AMR.2007.24351856>
- 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. *The Leadership Quarterly*, 27(3), 446–455. <https://doi.org/10.1016/j.leaqua.2015.10.008>
- Ryan, M. K., Haslam, S. A., & Postmes, T. (2007). Reactions to the glass cliff: Gender differences in the explanations for the precariousness of women's leadership positions. *Journal of Organizational Change Management*, 20(2), 182-197. <https://doi.org/10.1108/09534810710724748>
- Schein, E. (2010). Sawyer, K., & Valerio, A. M. (2018). Making the case for male champions for gender inclusiveness at work. *Organizational Dynamics*, 47(1), 1-7. <https://doi.org/10.1016/j.orgdyn.2017.06.002>
- Schein, E. (2010). *Organizational Culture and Leadership* (4 ed.). Jossey-Bass/John Wiley and Sons, Inc.
- Schweizer, L., & Nienhaus, A. (2017). Corporate distress and turnaround: Integrating the literature and directing future research. *Business Research*, 10(1), 3-47. <https://doi.org/10.1007/s40685-016-0041-8>
- Shen, W., & Joseph, D. L. (2021). Gender and leadership: A criterion-focused review and research agenda. *Human Resource Management Review*, 31(2). <https://doi.org/10.1016/j.hrmr.2020.100765>
- Smith, L. M. (2013). Working hard with gender: Gendered labour for women in male dominated occupations of manual trades and information technology (IT). *Equality, Diversity and Inclusion*, 32(6), 592-603. <https://doi.org/10.1108/EDI-12-2012-0116>
- Trahms, C. A., Ndofor, H. A., & Sirmon, D. G. (2013). Organizational decline and turnaround: A review and agenda for future research. *Journal of Management*, 39(5), 1277-1307. <https://doi.org/10.1177/0149206312471390>
- Trauth, E. M. (2002). Odd girl out: An individual differences perspective on women in the IT profession. *Information Technology and People*, 15(2), 98–118. <https://doi.org/10.1108/09593840210430552>
- Trauth, E. M. (2013). The role of theory in gender and information systems research. *Information and Organization*, 23(4), 277-293. <https://doi.org/10.1016/j.infoandorg.2013.08.003>

- Wei, K., Crowston, K., & Eseryel, U. Y. (2021). Participation in community-based free/libre open source software development tasks: The impact of task characteristics. *Internet Research*, 31(4), 1177-1202. <https://doi.org/10.1108/INTR-03-2020-0112>
- Wei, K., Crowston, K., Eseryel, U. Y., & Heckman, R. (2017). Roles and politeness behavior in community-based free/libre open source software development tasks. *Information and Management*, 54(5), 573-582. <https://doi.org/10.1016/j.im.2016.11.006>
- Woodfield, R. (2002). Woman and information systems development: Not just a pretty (inter)-face? *Information Technology and People*, 15(2), 119–138. <https://doi.org/10.1108/09593840210430561>
- Yang, B., Eckardt, R., Jin, F., & Tsai, C. (2021, July 26, 2021). Organizational influence across CEO life cycle: The moderating roles of prior performance and status. 81st Annual Meeting of the Academy of Management, Virtual.
- Zaccaro, S. J., & Banks, D. J. (2001). Leadership, Vision, and Organizational Effectiveness. In S. J. Zaccaro & R. J. Klimoski (Eds.), *The nature of organizational leadership: Understanding the performance imperatives confronting today's leaders* (pp. 181-218). Jossey-Bass: A Wiley Company.