

# When A Perceived Glass Ceiling Impacts Organizational Commitment And Turnover Intent: The Mediating Role Of Distributive Justice

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## ABSTRACT

*This study investigated the relationship between a perceived glass ceiling in an organization and commitment to that organization, with the expectation that the effect would be indirect and mediated by distributive justice perceptions. The same hypothesis was put forward with turnover intent as an outcome. The study uses VIE, Equity, Social Exchange, and Social Identity Theories to frame these arguments, and in both cases, partial mediation was present. Specifically, the effect of a perceived glass ceiling on each of the dependent variables was greater alone than when considered together with perceptions of distributive justice. The analyses and findings are outlined, and implications for theory and for practice are discussed.*

**Keywords:** Glass Ceiling; Distributive Justice; Organizational Commitment; Turnover Intent

## INTRODUCTION

While in recent years women have been the fastest growing group entering the business world, there are still concerns about the “glass-ceiling” that has historically kept them from reaching upper management positions. Over the past few decades a number of theories have been introduced to explain the disparity that exists in the business world between men and women in occupying senior management positions. One such explanation is that women simply do not have (or do not display) the kind of ambition/desire that men tend to show for climbing corporate ladders. Some posit that women are held back because they are not entrepreneurial or opportunistic enough in marketing and selling themselves to upper management and thus tend to get overlooked when it comes to promotion decisions. These may actually be self-fulfilling prophecies, as theories on motivation and goal-setting suggest that effort is, among other things, a function of the likelihood of success. With only a small percentage of females occupying the executive suite, there may be a perception of tokenism, in which case aspiring female managers will believe that they will have their chance to advance only when the “female” slot(s) become available. Others attribute the issue to the additional burden of motherhood and family responsibilities that many professional women face, in which case socially-ingrained gender leadership stereotypes and sexism could be at odds with gender equality. However, for those women who deliberately postpone their career goals for the sake of family, it becomes more difficult to argue that organizations are discriminating on the basis of ascribed group membership.

While speculations and assertions regarding obstacles to the progression of women’s corporate careers abound, there is a promising body of research on the saliency of glass ceiling perceptions. Studies have begun to systematically examine the theoretical and empirical connections between the glass ceiling phenomenon and outcomes such as job satisfaction, organizational commitment, and intent to leave the organization. The connections with organizational justice in general are fairly well-documented, but whether it is procedural or distributive justice that matters most remains a question. We continue with this line of inquiry and therefore contribute to the body of literature

on the glass ceiling in organizations. This study is modeled after the work of Foley et al. (2002), in particular, which found links between a perceived glass ceiling, distributive justice, perceived career prospects and intentions to leave the firm. However, while the Foley study uses glass ceiling to refer to the perception of ethnic barriers to the advancement of Hispanics, the concept most often refers to the transparent barriers that women face in the workplace. Also, in further generalizing the results of the Foley study, we find it important to diversify the sample beyond that of Hispanic law professionals.

The current paper seeks to (i) offer theoretical explanations for the effects that glass ceiling perceptions can have on important organizational outcomes, and (ii) empirically assess the direct effects of glass ceiling perceptions on organizational commitment and turnover intent as well as the indirect effects as mediated by distributive justice. Background information is provided on the glass ceiling and distributive justice constructs, followed by arguments to support a series of hypotheses about the relationship between glass ceiling perceptions and both organizational commitment and turnover intent. The research design is laid out, analyses and results are described, and implications for theory and for practice are addressed.

## **BACKGROUND**

### **Glass Ceiling**

The term “glass ceiling” in corporate America entered mainstream consciousness in the 1980s, although progress at the national level can be traced back to the civil rights movement of the 1960s. At that time, concerns had mounted regarding racial inequities, but the feminist movement soon brought gender equality to the forefront. While the “glass ceiling” originally referred to the maximum potential that women could achieve in organizations, it is commonly defined as “a barrier so subtle that it is transparent, yet so strong that it prevents women and minorities from moving up in the management hierarchy” (Morrison & Von Glinow, 1990) and thus has come to include racial and ethnic minorities as well.

Prior research on the glass ceiling has primarily addressed the question of whether or under what conditions such a barrier exists (e.g. Blum et al., 1994; Powell & Butterfield, 1997; Tharenou et al., 1994). Research has also focused on the causes (e.g. Ballenger, 2010; Boone et al., 2013; Rummelt & Viggian, 2011) and effects (e.g. Dost et al., 2012; Rosin & Korabik, 1991) of such a barrier, with a handful of studies considering the interplay between the glass ceiling and other independent constructs (Cech & Blair-Loy, 2010; Foley et al., 2002; Mooney & Ryan, 2009). While research on the glass ceiling has been largely anecdotal, some of the work does find theoretical grounding (Crocker & Major, 1989; Friedman & Davidson, 1999).

Studies have identified several self-related issues that surround women’s managerial mobility. Family factors (Bomuwela & Alwis, 2013) and motherhood in particular (Kargwell, 2008) have been found to contribute to the organizational glass ceiling. While women do display more of the behavioral traits such as empathy, supportiveness, and relationship-building (Appelbaum et al., 2013) and more transformational leadership qualities (Chao & Dexin, 2011) than do their male counterparts, they often lack the vision that is also a necessary component of effective leadership (Appelbaum et al., 2013).

The glass ceiling has also been attributed to structural conditions (Ballenger, 2010), with inadequate mentoring and networking opportunities (Boone et al., 2013; Dimoivski et al., 2010; Sabat & Mishra, 2010) emerging as particularly salient problems. In addition, wage differentials, organizational positioning, time commitments, occupational gender segregation, and promotional opportunities (Miller, 1999) have been said to limit the advancement of women to upper posts. Risper and Anesh (2013) blame a lack of respect from males and an insensitivity to the multiple roles that women assume. According to Ballenger (2010), there is social injustice at play, with upper management dictating the gender bias with which cultural capital is valued (Purcell, 2013). A study by Haslam and Ryan (2008) shows evidence of a “glass cliff”, whereby women seem to be selected for more precarious leadership positions, where failure is more likely, such as during times of declining organizational performance.

*Perceived Glass Ceiling.* Perceptions of a glass ceiling are important because they may inhibit women (as well as members of other under-represented populations) from seeking and obtaining promotions (Powell & Butterfield, 1994). In organizations where women comprise many of the lower-ranking positions, those women are likely to perceive the attribute that they share (gender) as inconsistent with the organization's requirements for success (Ely, 1995). Women also internalize negative evaluations and stereotypes by those in the majority to the point where they limit themselves and turn down opportunities for advancement due to the fear that they will not succeed (Ilgen & Youtz, 1986). In essence, this becomes a self-fulfilling prophecy. Hoobler et al. (2009) found that glass ceilings are perpetuated when bosses perceive family-work conflicts among female employees. The belief that social identity (in this case, gender) will overshadow other determinants of success, gender affiliation becomes an even more powerful source of identity (Crocker & Major, 1989; Friedman & Davidson, 1999).

Social identity has been found to be less salient among the post-boomer generations, however (Rummel & Viggian, 2011). Believing that "they can have it all", they are likely to expect the organization to accommodate family into the workplace and therefore will not perceive discrimination. According to Cech and Blair-Loy (2010), women who are working in unsupportive environments are more likely to blame glass ceiling effects on structural issues, whereas those who find themselves at the top levels of their organizations will attribute women's immobility to deficiencies in human capital or a lack of motivation. This idea is also supported by Mooney and Ryan (2009), who found that women differed in their perceptions of a glass ceiling depending on where they were in their career cycles.

### **Distributive Justice**

Perceptions of organizational justice focus on the role of fairness in organizations and include both distributive (outcome-related) and procedural (process-related) justice. Social comparisons and social identity processes underlie justice, in that individuals make comparisons in terms of rewards and overall treatment, and when injustice is perceived, one's identity is threatened. Therefore, justice can be seen as the antithesis of discrimination.

Adams (1965) has used a social exchange theory framework, and equity theory in particular, to evaluate the distributive type of justice, asserting that individuals believe outcomes are fair when they are consistent with individual inputs (Adams, 1965; Folger & Cropanzano, 1998), and when compared to the input/output ratio of some referent other. Other ways to look at distributive justice are in terms of equality or need (e.g. Leventhal, 1980). According to Lemons (2003), organizational justice perceptions are products of individual cognitive processes, which develop in response to cultural expectations. Definitions of justice/fairness may vary by context (e.g. Deutsch, 1975), as one may expect equity while at work but accept equality in the allocation of resources among friends or family. Equity, need, and equality, therefore, are simply different perceptions of what constitutes distributive justice, although the overarching theme is that fairness of resource allocations is sought.

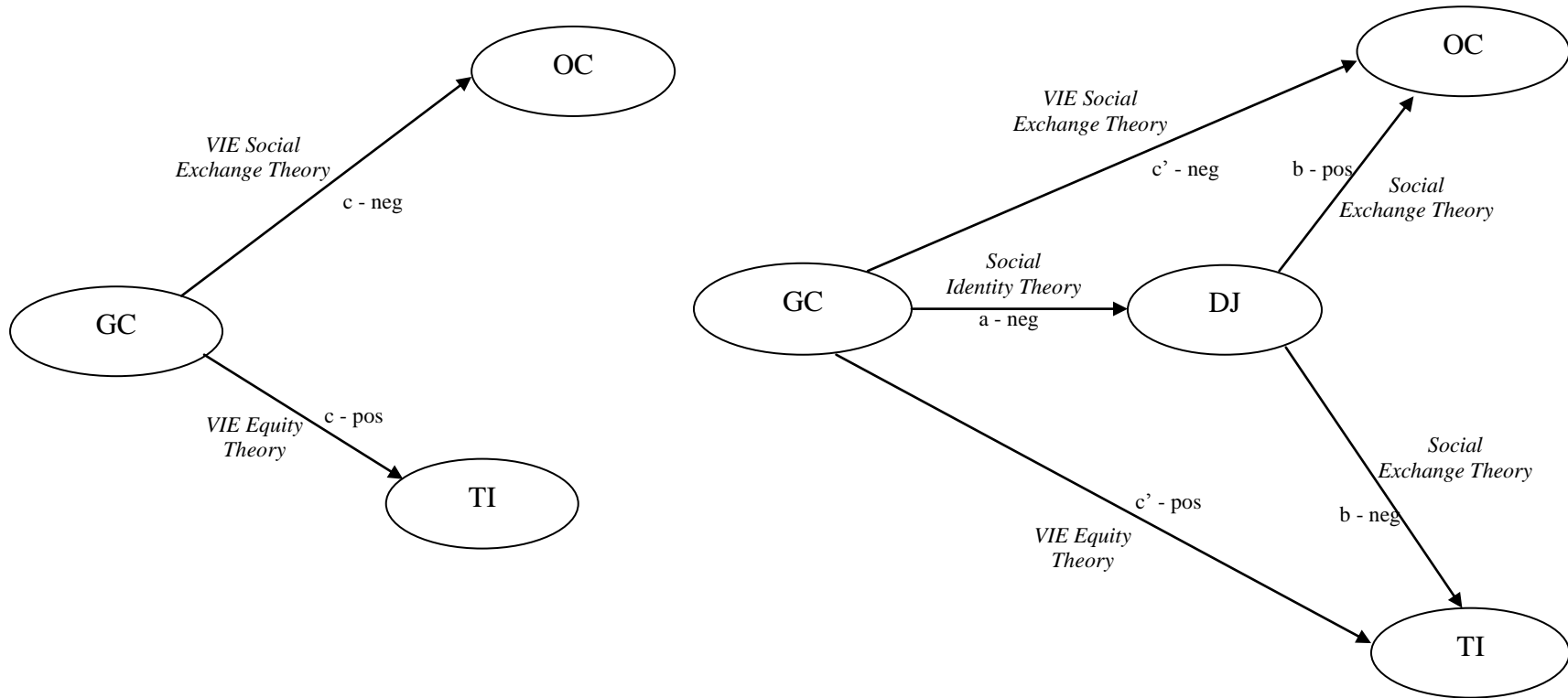
The concepts of justice and fairness are often used interchangeably, and outcomes at work may range from paychecks to office space to promotion decisions (Cohen-Charash & Spector, 2001; Younts & Mueller, 2001). The theory of distributive justice has been used to study a variety of organizational issues, such as work group incentive pay plans (Dulebohn & Martocchio, 1998) and conflict resolution processes (Karambayya & Brett, 1989), as well as organizational commitment and turnover intentions, which are the dependent variables addressed in this study and discussed in the following sections.

### **Hypotheses**

#### *Organizational Commitment*

In order to address the overall hypothesis that distributive justice (DJ) will mediate the relationship between a perceived glass ceiling (GC) and organizational commitment (OC), a series of other relationships are hypothesized, each of which is diagrammed in Figure 1 and explained below.

Figure 1: Theoretical Model and Hypothesized Relationships



*Glass Ceiling and Distributive Justice.* Females continue to perceive gender inequality and discrimination significantly more than do their male counterparts. For example, Fernandez (1981, 1991, and 1999) found that white males at all levels felt better than any other group about how they were treated in their organizations. In fact, members of racial and ethnic minority groups (e.g., Hispanic Americans, African Americans, Asian Americans, and Native Americans) as well as women, felt that white men were by far the most-favored group (Fernandez, 1981), providing some evidence of a linkage between the issues of discrimination and fairness. Foley et al. (2002) did in fact find the perceived glass ceiling to be negatively related to perceptions of promotion fairness and distributive justice, as did Hwang (2004) in a study of ethnic minorities. We can connect the notion of a perceived glass ceiling and distributive justice through the principles of Social Identity Theory, which underlie most of the research on equity and justice in organizations. Social Identity Theory explains much of why women attribute negative outcomes to discrimination rather than to other external factors. It suggests (Capozza & Brown, 2000; Tajfel & Turner, 1986) that people classify themselves and others into social categories and then identify more with members of their own category (in-group) than with out-group members. Further, people tend to identify more strongly with their in-groups when status differences between groups are salient (Ely, 1995). Therefore, since the perception of a glass ceiling accentuates status differentials between genders, women identify ever more strongly with their gender group, and thus their feelings of injustice are high. Thus, we hypothesize that

**H1a:** The perception of a glass ceiling is negatively related to the perception of distributive justice.

#### Glass Ceiling And Organizational Commitment

Organizational commitment refers to the extent to which an employee identifies with and is involved with an organization. Meyer and Allen (1991) summed up the various psychological states that comprise organizational commitment as affective/emotional attachment, continuance/cost-based commitment, and normative/obligation commitment.

There is evidence that important organizational outcomes (e.g. commitment) differ by gender. Commitment among females has been linked to empowerment, supervision, development opportunities, and work-life balance, whereas commitment among males has been linked to leadership practices, rewards, and company image. Achievement orientation, more typical among males than females, creates a perception that their ongoing commitment to the organization will lead to career advancement, and thus they are committed to their employers for different reasons than are females. Females perceive their own advancement as coming on the heels of organizational success. Further, they tend to stress the communal aspects of their jobs, such as working relationships and good communication, whereas males are more concerned with authority and personal advancement (Kulesa et al., 2005)

Jones (2002) argued that glass ceiling variables such as position stagnation, just-world beliefs, number of previous promotion inhibitions, hierarchical position, promotion opportunity satisfaction, and identity, all affect attributions of failures. These, in turn, affect self-esteem, self-efficacy, organizational citizenship behavior, level of aspirations, and organizational commitment. Based on data collected in Pakistan, employees displayed greater commitment with a decrease in the organizational glass ceiling (Dost et al., 2012). It is therefore hypothesized that

**H1b:** The perception of a glass ceiling is negatively related to organizational commitment.

#### Distributive Justice And Organizational Commitment

Prior justice research suggests that when individuals perceive that basic outcomes in the firm are fair, work-related attitudes are more positive (Greenberg, 1986, 1990). Lind and Tyler (1988) suggest that perceived justice is important for commitment because the use of fair procedures in decision-making provides evidence that the organization cares about the well-being of the employee. Therefore, we might expect the employee to respond in kind. This positive association has been found in several studies on job satisfaction (Conlon & Fasolo, 1990) and organizational commitment (Colquitt et al., 2001; Kumar et al., 2009; McFarlin & Seehey, 1992). Viewed from the opposing angle, a lack of distributive justice (or perceived inequity) can cause stress in itself and then can be

exacerbated by efforts to narrow the gap and restore equity (Sherman et al., 1983), and hence organizational commitment will be less likely. Therefore, we propose the following hypothesis:

**H1c:** The perception of distributive justice is positively related to organizational commitment.

#### Distributive Justice As Mediator

There is some evidence that distributive justice mediates the relationship between a perceived glass ceiling and organizational commitment (Foley et al., 2002), albeit with limited generalizability. However, goal-setting theory does provide some basis to expect mediation with respect to other populations as well. According to Kanter (1977), career goals are set lower when one believes the chances for promotion are low. Concluding that their gender is a handicap, female employees will not take the steps necessary to reach career heights (Tornblom & Vermont, 1999). The perceived handicap defies distributive justice, particularly with respect to the fairness of promotions, and even if this applies to one's career in general, it is likely to be evident to the employee only in the current organization and therefore the negative affirmation will decrease commitment. Therefore, we offer the following hypothesis:

**H1d:** The negative relationship between the perception of a glass ceiling and organizational commitment is mediated by the perception of distributive justice

#### *Turnover Intent*

In order to address the overall hypothesis that distributive justice (DJ) will mediate the relationship between a perceived glass ceiling (GC) and turnover intent (TI), a similar set of relationships are hypothesized. The first, regarding the negative relationship between a perceived glass ceiling and distributive justice, however, was addressed above, and so we begin with H2b.

#### Glass Ceiling And Turnover Intent

Employee retention has become a worldwide problem, and the antecedents and consequences of turnover are the hottest topics in the field of human resource management (Peng, 2006). According to Peng (2006), female employees come up against career discrimination, such as career separation and glass ceilings, which then differentiate males and females in terms of job satisfaction and turnover. Stroh et al. (1996) found that women were in fact more likely to leave their companies when they perceived limited opportunities for career advancement. Beehr and Taber (1993) have also found a connection between perception of upward mobility and intentions to leave. The executive recruiting firm of Allerton Heneghan & O'Neill suggests that a lack of understanding of diversity management may also be contributing to the high turnover rate among women in business (Kleiman, 1995). Findings from a study by Rosin & Korabik (1991) suggest that, for female managers, working in male-dominated environments contributed to low job satisfaction and a high propensity to leave their organizations. A study by Foster et al. (2011) found that when corporate culture provided mentoring, there was a stronger perception of careers and employers and this enhanced the ability to break through the glass ceiling, resulting in less turnover intent.

**H2b:** The perception of a glass ceiling is positively related to turnover intent.

#### Distributive Justice And Turnover Intent

The positive effect of justice perceptions on job satisfaction and organizational commitment is well-documented in the literature, along with the negative association to absenteeism and turnover intentions (Colquitt et al., 2001). Further, Foley et al. (2002) found promotion fairness to be positively related to perceived career prospects and negatively related to intentions to leave. We therefore hypothesize that

**H2c:** The perception of distributive justice is negatively related to turnover intent.



Distributive Justice As Mediator

Perceptions of organizational justice in the workplace appear to be central in explaining ethnic variations in job turnover. A model by Hwang (2004) suggests that fairness perceptions mediate a relationship between exogenous constructs related to ethnicity and outcomes related to intentions to leave an organization or a profession all-together (Hwang, 2004). In another study, a perceived ceiling on advancement was negatively related to perceptions of fairness in promotion decisions, which in turn were positively related to perceived career prospects and negatively related to intentions to leave (Foley et al., 2002). In a study aimed at identifying contextual factors that increase female mobility, Cook and Glass (2014) found that diversity among decision-makers increased the likelihood of promotion and also increased a female leader's tenure as CEO.

**H2d:** The positive relationship between the perception of a glass ceiling and turnover intent is mediated by the perception of distributive justice.

**RESEARCH DESIGN AND METHODOLOGY**

**Data Collection**

Data was collected with the cooperation of the Center for Women in Business at Bentley University, which maintains a database of female alumni. Dr. Susan Adams, director of the Center, sent an invitation en masse to the database population, asking them to participate by anonymously completing our electronic survey. The survey was intended to ascertain the respondents' perceptions of a variety of organizational and career-related issues. Completed surveys were submitted directly to the researchers, who ensured their confidentiality.

**Measures**

*Glass Ceiling (GC).* Four items were designed to measure perceptions regarding a "glass ceiling". One asked about the extent to which the respondent thought that such a barrier exists at his/her company, rated on a 5-point scale and anchored by "to no extent" on one end and by "to a very great extent" on the other. The others asked about sufficient opportunities to advance into senior management at the firm, the chance that a women could become CEO within the next 10 years, and whether the number of women achieving senior executive positions was steadily rising. These items were ranked on a 5-point scale from "strongly disagree" to "strongly agree". These four loaded strongly on one factor using principal components method of extraction, with loadings ranging from .84 to .86 based on 551 valid cases. The factor solution explained 72 percent of the variance and had a scale reliability of .87.

*Distributive Justice (DJ).* Distributive justice was measured using four items, on a 5-point scale ranging from "not at all" to "a great extent". One such item was "to what extent do your opportunities for promotion in your organization reflect your level of accomplishments?" These items were adopted and modified from Price and Mueller's (1986) Distributive Justice Index. For the current study, they also loaded as one factor, with loadings ranging from .78 to .88, using the principal components extraction method. The solution explained 68 percent of the variance and Cronbach's Alpha for the scale was .84.

Measures for *Organizational Commitment (OC)* and for *Turnover Intent (TI)* were embedded in the survey with responses on a 5-point scale from "strongly disagree" to "strongly agree". *Organizational Commitment.* Four items were meant to measure organizational commitment, such as "This organization means a great deal to me" and "I don't feel emotionally attached to my organization" (which was reverse-coded). These were selected from the Allen and Meyer's (1990) affective component of commitment, which in turn were borrowed from the original OCQ (Organizational Commitment Questionnaire, Mowday et al., 1979). *Turnover Intent.* Four items, adopted and modified from the Michigan Organizational Assessment Questionnaire (Cammann et al., 1983) measure turnover intent, including "If I had the choice, I would leave my current employer as soon as I could" and "I will be actively looking for a job in the foreseeable future". As such, the Organizational Commitment and the Turnover Intent items were also factor analyzed. Using the principal components method of extraction, all four commitment items loaded on one factor (loadings ranged from .59 to .93, the solution explained 70.7 percent of the variance, and Crobach's

alpha was .86.), as did all four Turnover items (loadings ranged from .93 to .94, the solution explained 87 percent of the variance, and Cronbach's alpha was .95).

## RESULTS

Surveys were received from 767 respondents, of which 606 were deemed usable for analysis. Sample characteristics can be seen in Table 1. Respondents were diverse in terms of age, with only a slightly greater percentage in the younger category. While all respondents had university degrees, half had master's degrees as well, and 1.8 percent were Ph.Ds. The majority of respondents (56 percent) were married, and more than half of those who were married had dependent children living at home. Of the 44 percent who reported being single, a small percentage also had dependent children living at home (1 percent of the single respondents). Interestingly, a great deal of the respondents were relatively new to their current organizations (44.9 percent had tenures of three years or less). A small percentage (6.3 percent) had been with their companies between 16 and 20 years, and no one reported having been with their organizations for more than 20 years. In terms of broad occupational categories, 35.3 and 30.6 percent worked in technical/professional and middle management positions, respectively, while 15.1 percent identified as executives or top level managers. Respondents worked in several different industries, of which banking and financial services was most represented (26 percent). 12.7 percent reported that they worked in IT, 10.1 in manufacturing, and 9.9 in education. A variety of other industries were represented as well, although to a lesser extent.

**Table 1: Sample Characteristics**

	%		%
<b>Age</b>		<b>Position</b>	
30 or younger	32.3	Clerical/Office Support	1.2
31 – 40	24.7	Services Support Staff/Associate	9.4
41 – 50	26.7	Technical/Professional	35.3
51 or older	16.4	Supervisory Position	8.5
<b>Education</b>		Middle Management	30.6
Bachelor's Degree	48.8	Executive/Top Level Management	15.1
Master's Degree	49.4	<b>Industry</b>	
Ph.D.	1.8	Financial Services/Banking	26.0
<b>Family Status</b>		Information Technology	12.7
Single with no dependent children	39.3	Manufacturing	10.1
Single with dependent children	4.4	Education	9.9
Married with no dependent children	19.3	Healthcare	6.5
Married with dependent children	36.9	Insurance/Risk Management	5.8
<b>Tenure with Organization</b>		Government	2.3
3 or less	44.9	Non-Profit	2.3
4 - 6	25.4	Retail	2.1
7 - 10	12.1	Consulting	1.8
11 - 15	11.4	Accounting	1.4
16 – 20	6.3	Real Estate/Construction	1.4
		Other	17.7

A correlation table with the variables of interest and all potential control variables is shown in Table 2. Controls included respondent age, education level, percentage of women in executive positions in the respondent's firm, and the extent to which the respondent felt that gender positively impacted his/her chances for advancement at the firm. Prior to hypotheses testing, linear regressions were performed separately for each of the dependent variables of interest, including all of the aforementioned control variables, the independent variable of Perception of a Glass Ceiling, and the mediating variable of Distributive Justice. In the Organizational Commitment model, none of the control variables were significant and thus were not used in the regressions for testing the hypotheses. However, in the Turnover Intent model, the positive impact of gender on workplace advancement emerged as a significant control variable and was therefore included when testing the hypotheses for Turnover Intent.

Hypothesis testing was consistent with approaches suggested by Baron and Kenny (1986) and Preacher and Hayes (2004). This involved testing three conditions to determine whether mediation was present, as described by the following steps:



**Step 1: Does the independent variable affect the mediator?**

Represented by the equation  $M = \beta_{01} + aX + \varepsilon_1$ , linear regressions were conducted, first with only the independent variable of GC regressed on DJ, and second with the control variable of Gender Impact (simply for consistency across the Turnover Intent models) included in the equation. Without the control variable, as shown in Table 3 under Equation 1, GC is highly significant ( $p < .001$ ) and in the hypothesized negative direction, with a model R-square of .346. With the control variable included, as shown in Table 4 under Equation 1, GC is also highly significant ( $p < .001$ ) and in the hypothesized negative direction, and R-square is .382. Therefore, H1a and H2a are supported, and the first condition for mediation is met.

**Step 2: Does the independent variable affect the dependent variable?**

With Y representing Organizational Commitment or Turnover Intent, equation  $Y = \beta_{02} + cX + \varepsilon_2$  is tested with the results shown in Tables 3 and 4, respectively, under the column for Equation 2. For both dependent variables, GC is significant at  $p < .001$ , with beta coefficients in the hypothesized directions (negative for Organizational Commitment and positive for Turnover Intent) and with R-square for each of the models at .240 and .315. As a result, H1b and H2b are supported, and this second condition for mediation is met.

**Step 3: Does the mediator affect the dependent variable?**

Again with Y representing the two dependent variables,  $Y = \beta_{03} + c'X + \varepsilon_3$  was tested with both the independent variable and the mediator in the regression equation. Tables 3 and 4, under Equation 3, show that both GC and DJ are significant ( $p < .001$ ) in both models, with R-squares of .347 and .442. The effect of DJ is negative for Turnover Intent and positive for Organizational Commitment, consistent with the directions were hypothesized. The effect of GC is negative for Organizational Commitment and positive for Turnover Intent, also as hypothesized. Based on the results of this regression analysis, H1c and H2c are supported, and the third condition for mediation is met.

With all three conditions met, the possibility of full mediation is ruled out. In further testing for partial mediation, we compared  $c$  to  $c'$  in order to determine whether the direct effect of GC on each of the dependent variables is greater alone than when DJ is included in the equation (in other words, that the effect of GC is reduced by the inclusion of DJ). With .443 greater than .213, we are able to establish this for Organizational Commitment. The mediation effect of DJ is computed as .226 (the product of GC's beta coefficient in Equation 1 and DJ's beta coefficient in Equation 3). For Turnover Intent,  $c$  is also greater than  $c'$  (.457 greater than .207), and the mediation effect of DJ is computed as .247. These numbers are shown in Tables 3 and 4 as well.

The Sobel Test was used to examine the significance of the mediation effect for each of the dependent variables. The formula computes a z-value as follows:

$$a*b / \text{SQRT} (b^2S_a^2 + a^2S_b^2 + S_a^2S_b^2)$$

where  $a$  is the beta coefficient for GC in Equation 1 and  $S_a$  is the standard error of the coefficient, and where  $b$  is the coefficient for DJ in Equation 3 with  $S_b$  as the standard error of that coefficient. The z-score for Organizational Commitment was -8.26, and the z-score for Turnover Intent was 7.86. Therefore, both meet the criteria of +/- 1.96 for significance, and H1d and H2d are supported. While these unusually high z-values are the result of low standard errors in the denominator, the mean values for GC and DJ show no bias in favor of high values, and standard deviations on a 5-point scale were 1.01 and .96, respectively. Also for good measure, multicollinearity was examined to ensure that support for the hypotheses was not based on strong correlations among the independent and mediating variables. Variation inflation factors were less than 2.00 in all cases.

**Table 2:** Correlations Among All Variables

	Organizational Commitment	Turnover Intent	Age	Education	% Women Executives	Gender Impact	Perception of Glass Ceiling	Distributive Justice
Organizational Commitment	1							
Turnover Intent	-.735***	1						
Age	.025	.031	1					
Education	-.081	.118*	.185***	1				
% Women Executives	.214***	-.165**	.010	-.038	1			
Gender Impact	.366***	-.448***	-.114*	-.114*	.155**	1		
Perception of Glass Ceiling	-.490***	.523***	.072	.103*	-.437***	-.542***	1	
Distributive Justice	.553***	-.616***	-.015	-.077	.181***	.480***	-.588***	1

\*\*\* p < 0.001

\*\* p < 0.01

\* p < 0.05

**Table 3:** Mediation Analysis For Distributive Justice With Organizational Commitment (OC) As The Dependent Variable

Variable	Equation 1 Indep. (GC) → Mediator (DJ)			Equation 2 Indep. (GC) → Dep. (OC)			Equation 3 GC and DJ → Dep. (OC)		
	Beta Coeff.	Std. Error	Sig.	Beta Coeff.	Std. Error	Sig.	Beta Coeff.	Std. Error	Sig.
GC	-.564	.034	***	-.443	.034	***	-.213	.040	***
DJ	NA	NA	NA	NA	NA	NA	.401	.042	***
R-Square	.346			.240			.347		
F Significance	.000			.000			.000		
Direct Effect of GC → OC							-.213		
Mediating Effect of DJ on GC → OC							.401		
Total Effect of GC → OC							-.669		
Z-Value							-8.25		

\*\*\* p < 0.001

\*\* p < 0.01

\* p < 0.05

**Table 4:** Mediation Analysis For Distributive Justice With Turnover Intent (TI) As The Dependent Variable

Variable	Equation 1 Indep. (GC) → Mediator (DJ)			Equation 2 Indep. (GC) → Dep. (TI)			Equation 3 GC and DJ → Dep. (TI)		
	Beta Coeff.	Std. Error	Sig.	Beta Coeff.	Std. Error	Sig.	Beta Coeff.	Std. Error	Sig.
Gender Impact	.352	.063	***	-.465	.080	***	-.275	.076	***
GC	-.444	.039	***	.457	.049	***	.207	.051	***
DJ	NA	NA	NA	NA	NA	NA	-.557	.051	***
R-Square	.382			.315			.442		
F Significance	.000			.000			.000		
Direct Effect of GC → TI							.207		
Mediating Effect of DJ on GC → TI							.247		
Total Effect of GC → TI							.701		
Z-Value							7.85		

\*\*\* p < 0.001

\*\* p < 0.01

\* p < 0.05

**DISCUSSION**

Studies are emerging which systematically examine the theoretical and empirical connections between the glass ceiling phenomenon and outcomes such as commitment and turnover. Feelings of discrimination, which often

accompany perceptions of a glass ceiling, have brought justice and fairness into the discussion as well. Foley et al. (2002), in particular, found links between a perceived glass ceiling, distributive justice, perceived career prospects and intentions to leave the firm. However, while the Foley study looked at the perception of ethnic barriers to the advancement of Hispanics, the current paper focuses on the barriers that women face in the workplace. In addition, with a diversified sample across industries and professions, the current study is able to generalize results beyond that of Hispanic law professionals.

This study investigated the relationship between a perceived glass ceiling in an organization and commitment to that organization, with the expectation that the effect would be indirect and mediated by distributive justice perceptions. The same hypothesis was put forward with turnover intent as an outcome. The study uses VIE, Equity, Social Exchange, and Social Identity Theories to frame these arguments, and in both cases, partial mediation was present. Specifically, the effect of a perceived glass ceiling on each of the dependent variables was greater alone than when considered together with perceptions of distributive justice.

### **Implications For Theory**

This study responds to the need for theory development and empirical work on gender differences as they relate to important organizational outcomes. As part of a growing body of research on the glass ceiling, this study provides a framework grounded in several theories from multiple disciplines. Social Exchange Theory and VIE (or Expectancy Theory) provide the rationale for the direct relationship between a perceived glass ceiling and organizational commitment. Equity theory, as well as VIE, is used to explain the direct effects of a perceived glass ceiling on turnover intent. We also use Social Identity Theory, together with Social Exchange Theory, as a basis for the mediating role played by distributive justice. Considering multiple theories provides the grounding upon which future research can build.

### **Implications For Practice**

These results might be useful to organizations wishing to address any inequities in gender career mobility. Regardless of whether the inequities are real or perceived, feelings of unfairness and resentment (the justice component) can be costly. With commitment and turnover as arguably two of the most important outcomes for organizations, the direct and indirect effects of a perceived glass ceiling should not be ignored. For one thing, firm performance may suffer as commitment to the organization and its objectives diminishes. And in the event of turnover, firms risk losing valuable employees, in addition the costs associated with replacement and training. Firms that can ill afford to lose smart, talented women can benefit from understanding how such negative perceptions affect the bottom line. Firms may wish to document and compare their male and female retention rates to see how the perception of a glass ceiling contributes to business costs. Perceptions of a glass ceiling may even hamper recruiting, if word gets out to potential employees that women can only climb so high within the company.

We also highlight other potential inequities, such as compensation gaps among male and female employees in similar positions. While there is evidence that this gap has narrowed for high-ranking positions (Foster et al., 2011), companies should remain cognizant of perceived injustices throughout the organizational hierarchy. Mentoring, whether institutionalized or on an informal basis, may alleviate glass ceiling perceptions. When top-ranking women are able to communicate their beliefs about which qualities earned them their promotions, employees may change their points of reference for equity. In other words, where they might otherwise have compared their success to that of other women, they might identify with attributes other than gender. As mentors communicate their experiences, acquired rather than ascribed group memberships may come to the forefront as most valued by the company, which in turn may increase employee efforts and skill development.

### **Limitations And Future Directions**

It is difficult, if not impossible, to prove that a glass ceiling exists in an organization, as that would be tantamount to proving that discrimination exists. Short of filing a lawsuit, the belief, or even the suspicion, that such a ceiling exists can be cause for dissatisfaction. As such, perception is used as a proxy for the existence of a glass ceiling. It may also be a shortcoming of this study that cross-cultural applicability is limited, since many cultures

consider demographics and other ascribed characteristics in their salary and promotion decisions. Aesthetics is highly valued in Brazil, for example, and thus the physical appearance of front office staff is a legitimate concern of human resources, while in the U.S. this would be considered a discriminatory practice. Therefore, while elements of the model supported in this study can be applied to non-Western samples, the criteria for what constitutes a glass ceiling may require some tweaking. Researchers should be cognizant that referents chosen for social comparisons may differ substantially by culture. A comparative test of the model in other countries should shed light on the glass ceiling effects for multinational companies. It may also be fruitful to examine salient glass ceiling issues as they relate to firm performance, and perhaps to even compare this with overseas subsidiary performance. Finally, there has been some discussion that management could be “standing on a glass floor”, blocking career progress typically through inaction, and again, this may be more common in some cultures than others. This represents yet another opportunity for cross-cultural research on the glass ceiling phenomenon.

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**NOTES**