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Career Self-Efficacy and Glass Ceiling: Moderating Effect of Work-Related Masculinity Values

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Abstract

The aim of this study is to analyze the moderating effect of work-related masculinity values on the relationship between career self-efficacy and glass ceiling in organizations. Participants of this study were female employees from banks, pharmaceutical companies, and medical equipment distributors in Turkey. Data were collected through 186 questionnaires. The results showed a significant interaction between career self-efficacy and masculinity for the glass ceiling. For those individuals with high masculinity, career self-efficacy was not related to glass ceiling, whereas for those individuals with low masculinity, career self-efficacy was negatively related to glass ceiling. However, this study has some limitations. The results of the study cannot be precisely generalized, as the survey was only administered in three different sectors in Turkey. Other limitations are related to the possibility of common method bias and the effect size of the study.

Key words: Career self-efficacy, Glass Ceiling, Masculinity

1. Introduction

Even though there is a dramatic increase in the presence of women in the workforce, women's access to various managerial positions remains limited, and this is especially so for senior management positions all over the world (Black & Rothman, 1998; Oakley, 2000; Vianen *et al.*, 2002; Adams *et al.*, 2007; Weyer, 2007). According to Adams *et al.*'s study (2007), women, for instance, held less than 16 percent of the corporate officer positions in the United States (US) Fortune 500 companies in 2002 and less than 15 percent of Canada's FP500 corporate officer positions in 2004. Females also represented less than 2 percent of all Chief Executive Officer (CEO) positions at major US corporations in 2004. Similar to this result, Stuart's (2008) research indicated that there were only fourteen females in the CEO position at firms in the S&P 500. This phenomenon of impeding women's upward advancement to senior management positions in large corporations is well documented and has been referred to as "the glass ceiling" effect (Morrison *et al.*, 1995; Vianen *et al.*, 2002).

Cultural beliefs or schemas in a society or an organization and career self-efficacy are two important antecedents of the glass ceiling. According to expectation states theory, there are

shared gender stereotypes within society, and these stereotypes contain status beliefs (Ridgeway, 2001). When status beliefs develop about a status position, inequality arises between members of this status position. At this point, in high masculine societies, the gender gap is larger, equal opportunity is little (Hofstede, 2001), and greater status, worthiness, and competence are generally ascribed to men (Ridgeway, 2001). Opposite to this, in low masculine societies, the gender gap is smaller, and equal opportunity is much prevalent with more women in working life. In addition, women's liberation means that men and women should take equal shares both at home and at work (Hofstede 2001). Thus, women's perceptions of the glass ceiling can vary due to their cultural beliefs. Another factor associated with glass ceiling is self-efficacy beliefs. Self-efficacy is defined as "individuals' beliefs about their capabilities to organize and execute the courses of action needed to manage prospective situations" (Bandura, 1997, p.3). "Perceived self-efficacy determines how individuals think, feel, motivate themselves, and behave" (Bandura 1999, p.2). Thus, self-efficacy beliefs, especially about career, are very important for people's ascent up the career ladders and their perceptions about the glass ceiling.

The aim of this study is to analyze the moderating effect of work-related masculinity values on the relationship between career self-efficacy and glass ceiling in organizations. The study expands the literature on glass ceiling by examining the moderating effect of masculinity on the relationship between career self-efficacy and glass ceiling. Second, even though the antecedents and consequences of the glass ceiling phenomenon have been well documented in Western countries (Vianen *et al.*, 2002), little is known about this relationship in non-Western countries, such as Turkey. From this point of view, this study is important for generalization of this relationship to non-Western societies.

2. Theoretical Background and Hypotheses

Three approaches may explain the glass ceiling phenomenon or gender-related inequality in organizations: biological models, socialization models, and structural/cultural models (Cleveland *et al.*, 2000; Bartol, 2003; Weyer, 2007). According to biological models, there are biological differences between men and women, such as genetic, hormonal, and physical characteristics, and the reasons for these differences are the result of genetic patterns evolved from adaptations to differing reproductive circumstances of early males and females. These adaptations have emerged slowly over thousands of generations, and these differences are stable and necessary for survival (Cleveland *et al.*, 2000; Lueptow *et al.*, 2001). Socialization models focus on observed differences between men and women. The models assume that men and women behave differently due to various social and cognitive development processes of the individuals related with life stages, such as schooling and work life. In this approach, observed differences are not stable, but on the contrary, are subject to change (Cleveland *et al.*, 2000; Bartol, 2003). According to structural-cultural models, social structures, systems, and arrangements lead and define gender differences due to discrepancies in status and power (Bartol, 2003). In these models, differences exist to keep the powerful in control and the powerless without power, and these are changeable (Cleveland *et al.*, 2000). Socialization and structural/cultural models have received more attention in the literature than biological models (Bartol *et al.*, 2003) and have been called "the most accepted explanation for gender differences" (Lueptow *et al.*, 2001).

On the other hand, it is necessary to explain expectation states theory, which is one of the most prominent theories within structural-cultural models (Weyer, 2007). According to expectation states theory, there are shared gender stereotypes within society and these stereotypes contain status beliefs (Ridgeway, 2001). Status beliefs refer to widely shared cultural beliefs or schemas about the status positions within society, such as gender, race, ethnicity, education, or occupation (Berger *et al.* 1980; Ridgeway, 2001; Weyer, 2007). When status beliefs develop about a status position, inequality arises between members of this status position (Ridgeway, 2001). In this context, these beliefs associate greater status, worthiness, and competence, and more valued skills with the advantaged group than the disadvantaged group within status position (Ridgeway, 2001). Thus, whereas agentic attributes are generally ascribed to men, communal attributes are generally ascribed to women (Eagly, 2001). Agentic characteristics and behaviors can be described as assertiveness, ambition, competing for attention, and making problem-focused suggestions. Communal characteristics might be described as speaking tentatively, supporting and soothing others, and being helpful and sympathetic (Eagly, 2001; Weyer, 2007).

It is clearly understood that cultural beliefs or schemas about gender are an important antecedent of the glass-ceiling phenomenon in society. These beliefs, schemas, or expectancies constitute gender roles in a society, and individuals internalize these gender roles through the socialization process. Besides, these beliefs or schemas vary from society to society. At this point, the typology of Hofstede about cultural characteristics may help to understand the differences between societies about gender roles better. One of Hofstede's cultural dimensions is masculinity, with its opposite pole as femininity (Hofstede, 2001). According to Hofstede (2001), "in high masculine cultures, the gender gap is larger; equal opportunity is little; a smaller portion of women are in working life; socialization occurs through traditional gender roles; women represent themselves in the same terms as men; and women's liberation means that women should be admitted to positions hitherto occupied only by men. Opposite to this, in low masculine cultures, the gender gap is smaller; there is greater equal opportunity; more women are in working life; socialization occurs through nontraditional gender roles; women represent themselves in their own terms; and women's liberation means that men and women should take equal shares both at home and at work". In this respect, it could be hypothesized that masculinity values are positively related to the glass ceiling, thus giving Hypothesis H1:

H1: Work-related masculinity values are positively related to the glass ceiling.

On the other hand, self-efficacy beliefs are also associated with the glass ceiling. Self-efficacy is defined as "individuals' beliefs about their capabilities to organize and execute the courses of action needed to manage prospective situations" (Bandura, 1997, p.3). "Perceived self-efficacy determines how individuals think, feel, motivate themselves, and behave" (Bandura, 1999, p.2). According to Bandura (1999), individuals with higher self-efficacy beliefs are self-confident; rely on their abilities, capabilities, and knowledge; establish higher and incentive goals, and sustain a strong commitment to them. These people put in more effort when they encounter difficulties. In addition, when they experience a failure, they recover their sense of efficacy quickly. Their failures are based on their insufficient efforts, and lack of knowledge and skills, and then they take action to overcome these failures. In contrast, people with lower self-efficacy beliefs avoid difficult tasks because of personal threats and lack of confidence. They have a low desire to achieve

and a weak commitment to the goals they are determined to pursue. When faced with difficulties, they reduce and stop their efforts. They slowly recover their sense of efficacy after a failure or obstacle. Since they view deficient performance as lack of ability, it does not require much failure for them to lose faith in their capabilities.

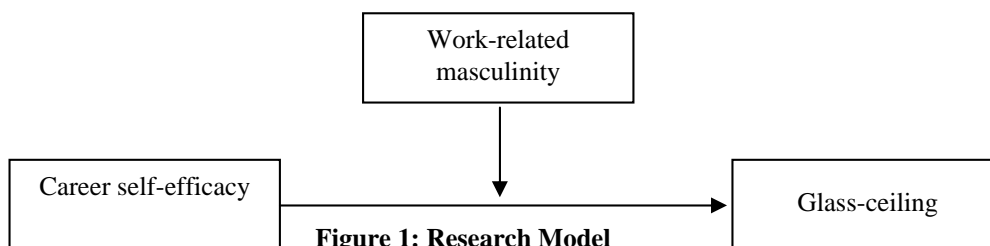
As shown in the above explanations, it is evident that people's self-efficacy perceptions are an important determinant in how they organize, create, and manage the environment that affects their career plans, career development, and access to managerial positions (Bandura, 1997). At this point, whereas high career self-efficacy facilitates women to reach their career aspirations, low career self-efficacy blocks women. In this context, women have high career self-efficacy beliefs, establish higher career goals, determine career strategies, and put in more effort to reach those career goals (Ballout, 2009). When faced with barriers that block their advancement to senior management positions, they put in more effort to remove these barriers. Opposite to this, when women with low career self-efficacy perceptions are faced with difficulties, they reduce and stop their efforts to remove the barriers. For instance, Betz and Hackett (1981) indicated, "women's lowered sense of efficacy for traditionally male-dominated occupations constraints their occupational development and pursuits" (as in cited Bandura, 1997, p.188). In sum, career self-efficacy beliefs are very important for women's ascent up to career ladders and for perceptions about the glass ceiling. Therefore, we advance the following hypothesis:

H2: Career self-efficacy is negatively related to the glass ceiling.

As explained previously, in masculine societies, greater status, worthiness, and competence, and more valued skills are generally ascribed to men more than women by the individual him/herself and others (Ridgeway, 2001). This ascription varies due to the level of work-related masculinity values. That is why the work-related beliefs of organization members about gender status affect the position of women in the organization. For instance, in higher masculine organizational cultures, members, especially decision makers about advancements, will think that men are more suitable and competent for managerial positions than women are. Therefore, even though women have high career self-efficacy perceptions, they are faced with organizational barriers for advancement in the organizational ladders. Thus, we expect to find that strong career self-efficacy has the most negative effect on glass ceiling among individuals with low masculinity but may contribute relatively little to the glass ceiling among individuals with high masculinity. Thus, we hypothesize:

H3: Work-related masculinity values moderate the relationship between career self-efficacy and glass ceiling, such that the relationship is stronger at lower than at higher levels of masculinity.

Figure 1 depicts the research model.



3. Research Method

3.1 Sample

Participants of this study were female employees from 11 bank branches, 4 pharmaceutical companies, and 2 medical equipment distributors in Turkey. Out of the 250 questionnaires distributed, 193 were returned, giving a response rate of 77 percent. Women employees worked in departments, such as retail banking, commercial banking, corporate banking, private banking, consumer banking, small business banking, wealth management, mortgage departments for the banks; sales and marketing departments for pharmaceutical companies; and medical equipment distributors. Seven incomplete questionnaires were excluded from the analyses, so the final sample comprised of 186 female employees. The average age and organizational tenure of employees were 30 and 6.1 years respectively. Fifty seven percent were married and 72 percent had a Bachelor's degree, with the remaining employees having a graduate or vocational degree.

3.2 Measures

This study used a self-report questionnaire. The questionnaire had four parts: (1) career self-efficacy questions; (2) work-related masculinity values questions; (3) glass ceiling questions; and (4) demographic information.

Career self-efficacy: We developed a 5-item perceived career self-efficacy scale (Appendix) by utilizing Schwarzer *et al.*'s (1999) generalized perceived self-efficacy scale. The scale was measured on a 5-point scale, ranging from 1 = "strongly disagree" to 5 = "strongly agree". Higher scores are associated with perceptions of higher career self-efficacy. An exploratory factor analysis was performed for career self-efficacy in SPSS 15.0. The Kaiser–Meyer–Olkin measurement of sampling adequacy was .846, indicating sufficient intercorrelations. Barlett's Test of Sphericity was significant (Chi-square = 359.537, $p < .001$). Exploratory factor analysis indicated that one factor with eigenvalues was greater than 1.0, and the explained variance was 62.147 percent of the total variance. The alpha reliability of the scale was .844.

Work-related masculinity values: We measured work-related masculinity values with 5 items (Appendix). Three of the items came from Dorfman and Howel's scale (Wu, 2008), and we developed the last 2 items of this sub-scale. This scale was measured on a 5-point scale, ranging from 1 = "strongly disagree" to 5 = "strongly agree". Higher scores are associated with a higher perception of masculinity. An exploratory factor analysis was performed for masculinity values in SPSS 15.0. The Kaiser–Meyer–Olkin measurement of sampling adequacy was .694, indicating sufficient intercorrelations. Barlett's Test of Sphericity was significant (Chi-square = 263.688, $p < .001$). Exploratory factor analysis indicated that one factor with eigenvalues was greater than 1.0, and the explained variance was 51.211 percent of the total variance. The alpha reliability of the scale was .758.

Glass ceiling: We developed 5-item perceived glass ceiling scale (Appendix). The item "In my organization, there is no distinction between men and women for promotions to managerial positions" was positively worded and reverse coded for data consistency prior to data analyses. This scale was measured on a 5-point scale, ranging from 1 = "strongly disagree" to 5 = "strongly agree". Higher scores are associated with perceptions of a higher glass ceiling. An exploratory factor analysis was performed for the perceived glass ceiling

in SPSS 15.0. Kaiser–Meyer–Olkin measurement of sampling adequacy was .864, indicating sufficient intercorrelations. Barlett’s Test of Sphericity was significant (Chi-square = 538.544, $p < .001$). Exploratory factor analysis indicated that one factor with eigenvalues was greater than 1.0, and the explained variance was 69.427 percent of the total variance. The alpha reliability of the scale was .887.

4. Results

4.1 Preliminary Analyses

Firstly, a confirmatory factor analysis was conducted to test the measurement model (Table 1). A three-factor measurement model (career self-efficacy, work-related masculinity values, and glass ceiling) in which all parameters were freely estimated, was compared with two alternative models: a structural null model where relationships between variables were fixed to zero, and a one-factor model, which specified where all items were loaded on a single factor (Esinberger, 2009; Harvey & Martinko, 2009; Mckee-Ryan, 2009). Chi-square difference tests demonstrated that the three-factor model fit the data better than the structural null model did ($\Delta\chi^2(3) = 18.94, p < .05$) and the one-factor model ($\Delta\chi^2(3) = 743.97, p < .05$) did. Besides, Harman’s one-factor test, one of the most widely used statistical techniques to detect common methods variance, was performed on 15 variables (Podsakoff *et al.*, 2003; Carr & Kaynak, 2007). Three factors with eigenvalues greater than 1.00 together accounted for 61.907 percent of cumulative variance; the largest factor did not account for a majority of the variance (30 percent). Thus, no general factor was apparent (Harvey & Martinko, 2009). The one-factor model also supported this result. The one-factor measurement model had worse fit indices than the measurement model did ($\chi^2 = 929.42, df = 90, p = .000, RMSEA = .225, CFI = .64, NFI = .61$). Therefore, there was not a significant presence of common method variance.

Table 1. Confirmatory factor analysis of measurement variables

Model	χ^2	<i>df</i>	RMSEA	CFI	NFI	χ^2_{diff}	<i>df_{diff}</i>
Three-factor measurement model	185.45**	87	.078	.94	.90		
Structural null model	204.39**	90	.083	.93	.89	18.94	3**
One-factor model	929.42**	90	.225	.64	.61	743.97	3**

n = 186; ** $p < .01$

4.2 Descriptive Statistics and Intercorrelations

Table 2 presents the means, standard deviations, reliabilities, and intercorrelations for the study variables. Career self-efficacy was significantly and positively correlated with work-related masculinity values ($r = -.240, p < .01$) and glass ceiling ($r = -.231, p < .01$). In addition, a significant positive correlation was observed between masculinity values and glass ceiling ($r = .215, p < .01$). All the correlations between study variables were in the expected directions.

Table 2. Means, standard deviations, reliabilities, and intercorrelations among variables

Variables	Mean	SD	1	2	3	4	5	6
1. Marital status	1.43	.49	1					
2. Age	30.75	5.96	-.251**	1				
3. Tenure	6.11	5.24	-.175*	.749**	1			
4. Education	2.72	.68	.101	-.246**	-.242**	1		
5. Career self-efficacy	4.28	.62	-.103	.099	.161*	.170*	1	
6. Masculinity values	2.48	.92	-.121	-.071	-.041	-.044	-.240**	1
7. Glass ceiling	2.18	.96	.049	-.002	-.056	-.090	-.231**	.215**

n = 186; * *p* < 0.05; ** *p* < 0.01 (two-tailed).

4.3 Hierarchical Regression Analysis Results

Table 3 shows the results of the hierarchical regression analysis. Models 1–2 report that the standardized beta coefficients (β s) related with each individual step. Model 1 provided support for Hypothesis 1, which proposed a positive relationship between work-related masculinity values and glass ceiling. Work-related masculinity was significantly and positively associated with glass ceiling ($\beta = .169, t = 2.318, p < .05$). Hypothesis 2 suggested a negative relationship between career self-efficacy and glass ceiling. Career self-efficacy was significantly and negatively related to glass ceiling ($\beta = -.191, t = -2.611, p < .05$). Model 2 provided preliminary support for Hypothesis 3. Model 2 showed that there is a significant interaction between career self-efficacy and work-related masculinity values for glass ceiling ($\beta = .159, t = 2.013, p < .05$) and explained variance in the model beyond that due to main effects ($\Delta R^2 = .02, p < .05$). Figure 2 shows the plot of this interaction. As presented in this figure, there was a stronger negative relationship between career self-efficacy and glass ceiling for those with low masculinity. We performed simple slope analyses (Aiken & West, 1991), and these analyses showed that for those individuals with high masculinity, career self-efficacy was not related to glass ceiling ($\beta = -.139, t = -1.807, p > .05$), whereas for those individuals with low masculinity, career self-efficacy was negatively related to glass ceiling ($\beta = -.391, t = -3.176, p < .01$). These results support Hypothesis 3.

Table 3. Results of moderated hierarchical regression analyses with glass ceiling as the dependent variable

Independent variables	Glass ceiling	
	Step1 β	Step2 β
Career self-efficacy	-.191*	-.265**
Masculinity values	.169*	.162*
Career self-efficacy x Masculinity values		.159*
ΔR^2		.020
Adjusted R^2	.070	.086
<i>F</i>	8.013***	6.783***

n = 186; **p* < 0.05; ***p* < 0.01; ****p* < 0.001

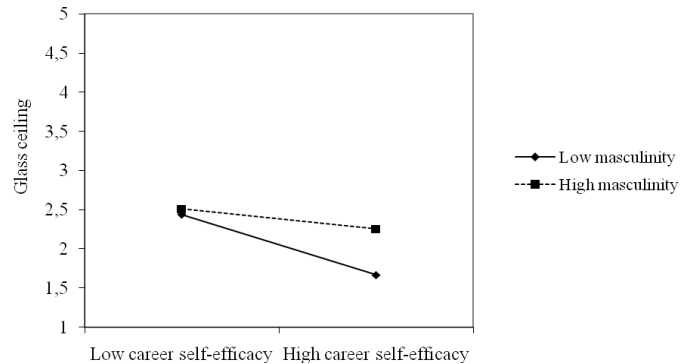


Figure 2. Work-related masculinity values as a moderator of the relationship between career self-efficacy and glass ceiling

5. Discussion

The results of this study present the importance of masculinity as a work-related cultural value that affects the relationship between career self-efficacy and glass ceiling. In this study, we found that masculinity values moderated the relationship between career self-efficacy and glass ceiling. For women with low masculinity, there was a negative relationship between career self-efficacy and glass ceiling, whereas for women with high masculinity, the relationship between career self-efficacy and glass ceiling was not significant. As mentioned before, cultural beliefs or schemas about gender are among the most important antecedents of the glass-ceiling phenomenon in society. These beliefs, schemas, or expectancies constitute gender roles in a society, and individuals internalize these gender roles through socialization process. At this point, women with high masculinity think that greater status, worthiness and competence, and more valued skills are ascribed to men than women (Ridgeway, 2001). They also believe that men are more suitable and competent for managerial positions than women are. Thus, women with high masculinity assume that to be a man rather than self-efficacy is generally the basic criterion for advancement to upper managerial positions in the organization. That is why it was not surprising to find no significant relationship between career self-efficacy and glass ceiling for women in high masculinity.

On the other hand, in this study we found that the levels of women's perceived glass ceilings were not high ($m = 2.18$). This might be because of our sample. For example, Culpan *et al* (2007) described the banking industry in Turkey as female-friendly. According to the 2010 report of The Banks Association of Turkey (2011), about 50 percent of 178.504 employees were women in 2010. In addition, in this sector, education levels of employees are very high (78 percent of employees had a Bachelor's degree). It is estimated there are about 25.000 medical sales representatives in pharmaceutical companies and medical equipment distributors in Turkey, and 95 percent of these employees had a Bachelor's degree (Kurumsal haberler, 2010). In this context, in Burke *et al.*'s study (2006), which was made in a Turkish bank, women reported fewer negative attitudes towards women, and more support, indicating higher levels of both job and career satisfaction. Besides, Jamali *et al.* (2006) found no evidence of glass-ceiling type barriers in the context of Lebanese banks. The findings of Jamali *et al.* (2006, p.637-638) showed

that “participants considered the cultures of their organizations as generally supportive and permeated by positive attitudes towards women.”

This study has potential limitations. First, the results of the study cannot be precisely generalized, as the survey was administered in only two different sectors in Turkey. Future studies, therefore, should allow for generalizations regarding this subject and must cover different countries (Bolat & Yılmaz, 2009). Further studies should also focus on essentially male-gendered industries. In this study, a self-report methodology was used, so another limitation is related to the possibility of common method bias. At this point, we performed Harman’s one-factor test to detect common methods variance (Podsakoff *et al.*, 2003). According to the analysis, no general factor was apparent. The one-factor model also supported this result. The one-factor measurement model had much worse fit indices than the measurement model did. Therefore, there was no significant presence of common method variance in this study. A third limitation is the effect size of the study. We calculated the effect size as $f^2 = .022$ (Aiken & West, 1991). According to Cohen (1988), this effect size has a small effect. That is why there is a need to replicate this study in other samples for extending generalization of our findings.

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Appendix

Career self-efficacy

- (1) I have the necessary job qualifications for moving up the career ladder.
- (2) When I am faced with difficult problems in my career path, I can solve them if I invest the necessary effort.
- (3) I have the potential for advancement to higher position in my job.
- (4) I rely on my abilities to achieve my career goals.
- (5) I have the necessary skills for ascent up the career ladder.

Work-related masculinity values

- (1) It is preferable to have a man in a high-level position rather than a woman.
- (2) It is more important for men to have a professional career than it is for women to have a professional career.
- (3) Men usually solve problems with logical analysis; women usually solve problems with intuition.
- (4) Men are inherently more successful than women are in solving organizational problems.
- (5) For married couples, it is important for a husband to have a higher-level career than his wife.

Glass ceiling

- (1) In my organization, women can usually move up to a certain organizational level, but not higher.
- (2) In my organization, there is no distinction between men and women for promotions to managerial positions. (R)
- (3) In my organization, no matter how much effort women put in, they can not usually access senior management positions.
- (4) In my organization, men are preferred for upward advancement to senior management positions rather than women.
- (5) In my organization, to be a manager is generally seen as a man's job.