

# **THE DIMINISHED EFFECT OF WOMEN'S ENTREPRENEURIAL SELF-EFFICACY ON FIRM PERFORMANCE**

*Alexander Glosenberg, Loyola Marymount University, North Carolina State University, USA*

*M.K. Ward, Curtin University, Australia*

*Jeffrey M. Pollack, North Carolina State University, USA*

## **ABSTRACT**

The purpose of this study is to test whether the relationship between entrepreneurial self-efficacy (ESE) and firm performance is lower for women than for men due to socioeconomic factors related to gender. To test our hypothesis, we conducted a meta-analysis and meta-analytic regression. Altogether, 92 relevant effect sizes were identified and included in the meta-analysis. Our hypothesis was supported ( $\beta=-.35$ ,  $b=-.05$ ,  $SE=.02$ ,  $p=.016$ ) with lower effect sizes tending to predominate among studies of more women. This study provides evidence of limitations to the generalizability of the strength of the relationship between ESE and firm performance.

## **INTRODUCTION**

According to some standard financial indicators, firms led by women often do not perform as well as firms led by men (Fairlie & Robb, 2009; Jennings & Brush, 2013). One explanation for differentials in performance between men and women is that many women might lack the same sort of experiences, social support, and encouragement that tends to lead to high levels of self-efficacy in their careers (Kossek et al., 2016). Meta-analytic evidence has shown that a high level of entrepreneurial self-efficacy (ESE; Chen, Greene, & Crick, 1998) is an important predictor of firm performance (Miao, Qian, & Ma, 2017). Thus, interventions to raise the ESE of women entrepreneurs might be a solution to boosting their success. However, it is unclear whether the relationship between ESE and firm success is the same between men and women.

## **HYPOTHESIS DEVELOPMENT**

The purpose of this study is to test whether the relationship between ESE and firm performance is influenced by gender. Specifically, this study tests the hypothesis that the relationship between ESE and firm performance is lower for women than for men. According to Frese's (2009) action-characteristics model of entrepreneurship, while self-efficacy in relation to entrepreneurial tasks is a predictor of adaptive entrepreneurial behaviors (e.g., social networking and risk-taking), there is a range of environmental factors that might moderate this relationship. First, firms run by women tend to be overrepresented in sectors like retail and personal services which might not be as dynamic as many other sectors. As reported by Hmieleski and Baron (2008), the relationship between self-efficacy and firm performance is diminished in less dynamic industries. Second, entrepreneurial behaviors like risk-taking and proactivity tend to be interpreted as masculine behaviors. Women enacting stereotypically masculine behaviors are more likely to be perceived negatively (Eagly & Karau, 2002) leading to the likelihood that higher levels of self-efficacy will not manifest in positive social outcomes including networking and investor relations. Third, women entrepreneurs are more likely to operate necessity-based businesses (Coleman & Robb, 2012) and, consequently, have to deal with the negative affect that accompanies resource constraints (Haushofer & Fehr, 2014) and that seems like to diminish the positive effects of high ESE on entrepreneurial success (see Baron, 2008).

## METHOD

To test our hypothesis, we conducted a meta-analysis and meta-analytic regression. Studies were included into the meta-analysis if they measured the relationship between ESE and firm performance and reported the gender makeup of their sample. Measures of firm performance included financial measures (e.g., revenue), non-financial measures (e.g., employment growth), and subjective measures (e.g., satisfaction with profitability). To locate studies for inclusion, searches were conducted of electronic databases, prior meta-analytic reviews, key journal outlets, conference proceedings, and by sending out notices to professional listservs. Procedures were based upon guidelines by Schmidt and Hunter (2015) and Cheung (2008). To determine the effect of gender on effect sizes, we utilized meta-analytic regression which controlled for success type (financial & objective) and whether or not a study focused on firms in a single industry or in multiple industries. In addition, to account for the possibility that our results might be due to different socioeconomic environments, we controlled for the GDP per capita of each study's country setting.

## RESULTS

The titles and abstracts of 23,587 search results were reviewed and the full texts of approximately 6% (1,520) of these search results were inspected if they appeared to meet inclusion criteria. Altogether, 57 studies with 92 relevant effect sizes were identified and included in the meta-analysis. Notably, this number of studies is greater than the meta-analysis conducted by Miao and colleagues (2017). Overall, the effect size of the ESE to firm performance relationship was 0.32 (95% CI: .28, .36) after correcting for sampling error, reliability in the criterion and predictor, and restriction of range in the predictor (.27 uncorrected). Meta-analytic regression revealed that the percentage of women in a sample was a negative predictor ( $\beta = -.35$ ,  $b = -.05$ ,  $SE = .02$ ,  $p = .016$ ) of effect sizes with lower effect sizes tending to predominate among studies of more women. Thus, our hypothesis was supported.

## DISCUSSION & IMPLICATIONS

Multiple theory-based and practical implications emerge from the finding that the relationship between ESE and firm performance tends to be weaker among women. First, this study provides evidence that there are broad and pervasive limitations to the strength of the relationship between ESE and firm performance. Future research should be focused on multiple contextual factors that women face that are likely to lead to this diminished relationship. For example, such factors may include the dynamism of industries that women tend to operate in, gendered stereotypes, and access to financial resources. Related, an important limitation of this study is that it was assumed that ESE tends to lead to higher levels of firm performance. However, it is possible that, at least to a certain extent, firm performance also can lead to higher levels of ESE. This is a critical area for future research to explore. Second, this study hints at the possibility that interventions to enhance the success of entrepreneurs by improving self-efficacy may be less effective among women, relative to men, unless such interventions overcome the factors that lead to the diminished relationship between ESE and firm performance. Here, policymakers hoping to correct for gendered imbalances in entrepreneurial outcomes will need to allocate resources to identifying and addressing these factors. We hope the present findings provide a more nuanced perspective to a relationship—between ESE and firm performance—that is often thought, incorrectly, to be a simple one.

## CONCLUSION

This study provides evidence of limitations to the generalizability of the strength of the relationship between ESE and firm performance. Appreciating the existence of such a diminished relationship is an important step toward a better understanding of women's entrepreneurial effectiveness. Future research should focus on why women tend to experience such a diminished relationship as a way to helping women to succeed as entrepreneurs despite obstacles to such success.

**CONTACT:** Alexander Glosenberg; alexander.glosenberg@lmu.edu; (303)720-9542; Loyola Marymount University, 1 LMU Drive, Los Angeles, CA 90045.

## APPENDIX

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