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Gender differences in optimism and asset allocation

Ben Jacobsen[a], John B. Lee[b], Wessel Marquering[c], Cherry Y. Zhang[d,*]

[a] University of Edinburgh, Edinburgh, United Kingdom
[b] University of Auckland, Auckland, New Zealand
[c] RSM Erasmus University, Rotterdam, The Netherlands
[d] Nottingham University Business School, Ningbo, China

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ABSTRACT

We investigate two alternative explanations why men may hold more stocks than women do. Apart from the traditional explanation of a gender difference in risk aversion, gender differences in either optimism or in perceived risk of financial markets might cause men to hold riskier assets. Our results show that men tend to be significantly more optimistic than women regarding a broad range of issues, including the economy and financial markets. After we take differences in optimism into account, systematic gender differences in asset allocations disappear.

1. Introduction

There is a wealth of evidence that women, on average, hold less risky assets than men do. Jianakoplos and Bernasek (1998), for example, document that single men invest, on average, 46 percent of their wealth in risky assets, while single women invest only 40 percent.[1] This gender gap in equity holdings is often attributed in the literature to women being more risk averse than men regarding financial risk (Jianakoplos and Bernasek, 1998; Olsen and Cox, 2001; Eckel and Grossman, 2007; Watson and McNaughton, 2007; Croson and Gneezy, 2009; Charness and Gneezy, 2012). Standard portfolio theory, however, provides two alternative explanations: Differences in asset allocation can also occur if investors have different

* Corresponding author. Tel.: +86 189 1189 4733.
E-mail addresses: ben.jacobsen@ed.ac.uk (B. Jacobsen), byong.lee@auckland.ac.nz (J.B. Lee), wmarquering@rsm.nl (W. Marquering), cherry-yi.zhang@nottingham.edu.cn (C.Y. Zhang).

[1] Cohn et al. (1975) also find that non-professional female investors allocate less of their portfolios to risky assets. Sunden and Surette (1998) conclude, using household data over 1992 and 1995 that women tend to invest their retirement funds in less risky assets than men do. Similarly, Agnew et al. (2003) find that male pension fund participants' equity allocation is higher, at 43 percent, than that of female participants, at 33 percent.

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expectations about future returns and/or different perceptions about the riskiness of financial markets. In this study we consider whether these two alternative explanations also help to account for gender differences in asset allocation.

We first investigate whether there are gender differences in expectations about the future in economic and stock market outlook in particular. Our results—based on Gallup polls and University of Michigan Consumer Sentiment Index surveys—indicate that this is the case: Men tend to be significantly more optimistic than women regarding the economy and the stock market. Next, we consider how gender differences in optimism affect investment decisions. We confirm the gender difference in risky asset holdings documented in the literature: an average male invests 47.4 percent of his wealth in stocks, while an average female invests only 43.0 percent (a statistically significant difference with a *t*-value of 4.50). However, when we take optimism into account, we find that differences in optimism are related to differences in portfolio holdings: Optimists invest more in equity, 50 percent of their entire portfolio versus 35 percent for very pessimistic investors. Our results further indicate that a gender gap in risk holdings largely stems from women being more pessimistic. After controlling for optimism and other personal traits, we do not find a statistically significant difference in risky holdings between male and female investors. Indeed, we find that very optimistic women invest almost 5 percent more in stocks than very optimistic men do. We also document evidence that women perceive stock market risk to be significantly higher than men do, which could also potentially lead women to hold fewer stocks in their portfolios. Last but not least, we test whether gender differences in optimism are restricted to the economy and stock markets or, whether these hold more generally also for other aspects of life. Our results indicate that this gender difference tends to be a broader phenomenon.

In short, our paper finds supporting evidence for the two alternative explanations for a gender gap in risky holdings. Women expect, on average, worse future stock market performance and also believe that the stocks are riskier than men do. These findings can help bridge the gap between field data and experimental evidence. While field studies based on differences in portfolio holdings claim that women are more risk averse, evidence from laboratory experiments studying gender differences in risk aversion remains inconclusive (see for instance Schubert et al., 1999). Our findings suggest that differences in the riskiness of actual portfolios may also be caused by gender differences in optimism and perceived risk and need not stem from differences in risk aversion alone.

In all cases where data from other countries are available, the empirical evidence corroborates the US results. With international consumer confidence data from all relevant questionnaires available from the Roper Center,[2] we find that males are, on average, more optimistic than females in all 17 European countries that we examine and significantly so in 16 countries. Our results are also robust over different time periods. For instance, in the US there has only been one month (March 2000) since 1978 when women's consumer confidence was higher than men's, based on the well-known University of Michigan Consumer Sentiment Index surveys of at least 500 respondents each month. The gender difference in optimism is not limited to the stock market but also applies to other aspects of economy, such as economic growth, interest rate, and inflation. It also holds regardless of whether we consider questions about the respondent's personal future economic situation or the general state of the economy.

To verify whether the observed gender difference in optimism holds beyond economic variables, we searched all surveys collected by the Roper Center for Public Opinion for all questions with gender-specific results and where respondents could express different degrees of optimism and pessimism. We found 24 additional questions in 33 different polls and surveys from mostly NBC News/*The Wall Street Journal* and ABC News/*The Washington Post* over the period 1999–2008.[3] The results suggest that, with the exception of questions regarding government, gender differences in optimism are generally persistent. Questions focusing on the degree of optimism/pessimism also minimize the probability that these differences are caused by participants underestimating the likelihood of different future scenarios (e.g., Fehr-Duda et al., 2006). In short, we document pervasive gender differences in optimism across different countries, time periods, and dimensions. These gender differences persist after we control for other personal traits such as income, employment, wealth, education, marital status and being a white male.

While academic studies in psychology offer support for the popular view that men and women "originate from different planets" (Hyde, 2005), gender differences in optimism have received relatively little attention. This is surprising, since optimism may also be a critical component in various aspects of life. For instance, according to several health studies, optimists, on average, have lower blood pressure, cope better with stress, show better recovery from cancer and coronary bypass surgery, and are less likely to become depressed.[4] Given the importance of optimism in other social sciences and health-related issues, our finding of a strong gender difference in optimism may have implications beyond economics. Moreover, in many instances, gender differences are attributed to differences in risk aversion, involving, for example, the likelihood of nuclear war, the dangers of alcohol and drugs, technology, radioactive waste, preferred US presidents, economic consumption, the labor market, and investment decisions. Differences in optimism or perceived risk may also play an important role in explaining these differences, as with different equity holdings of men and women.

[2] The Roper Center is an archive that preserves the data from polls conducted by many leading survey organizations for the use of researchers, students, and journalists (http://www.ropercenter.uconn.edu).

[3] While we realize this may lead, to some extent, to a smorgasbord of questions, using many different questions from different sources based on questionnaires developed by professionals assures robustness and minimizes the likelihood that our overall results are affected by incorrect phrasings of questions.

[4] See, for instance, Felton et al. (2004) and the references within.

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