

Gender and Workplace Perceptions Around the World: Evidence from the World Values Survey*

Ray Fisman
Columbia University and NBER

Maura O'Neill
University of California, Berkeley

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Abstract: We study gender differences in attitudes in the role of luck versus hard work in achieving success, and on the merits of competition, using data from the World Values Survey. Women are consistently more likely to report that success is a matter of luck, and hold negative views towards competition. Further, these differences are nearly twice as great among survey respondents in supervisory roles. These results are suggestive that there may be an important attitudinal component underlying gender differences in workplace achievement.

* -- R. Fisman, Columbia University Graduate School of Business, Uris 823, New York, NY 10027, USA, phone: (212) 854-9157, fax 1 (212) 854-9895, email: rf250@columbia.edu.

-- M. O'Neill, University of California Berkeley Haas School of Business, F457, Berkeley, CA 94720-1930, USA, phone: (206) 605-0790, fax 206 329-8342, email: moneill@haas.berkeley.edu

Much has been written on gender discrimination in the workplace in a range of academic literatures and also the popular press.¹ Within economics, prior research has focused on human capital investments and time out of work as explanations for differences in labor market outcomes of females (see, for example, Kunze, 2000). The residual difference in pay or promotion may be accounted for in part by unobserved differences in employee quality, and in part by the differential treatment of women with the same skills and qualifications as their male counterparts (i.e., discrimination). These explanations are by no means unrelated: If workplace discrimination exists, women's beliefs about the returns to effort may be affected, and hence their willingness to work hard to get ahead (and hence unobserved quality). This, in turn, can be self-fulfilling: If women are demotivated as a result of these perceptions, they could actually *become* less effective employees.

Motivated by these observations, we take a first step in studying gender differences in perceptions towards effort and competition in the workplace worldwide based on data from the World Values Survey (WVS). Specifically, we look at whether survey respondents attribute success in life to luck or hard work as our measure of beliefs about the returns to effort. We find that there is a significant 'gender perceptions gap' – women are more likely to attribute success to luck rather than hard work. Remarkably, this perceptions gap is consistent across countries: for example, it is as strong in Sweden as in Argentina. More generally, the gender gap is uncorrelated with a country's level of economic or social development. We also examine how the perceptions gap is affected by one's place in the workplace hierarchy. Interestingly, we find that it is wider for those in supervisory positions. This is consistent with the widening gap in the actual advancement of women in the upper echelons of the business world (see, for example, Blau and Kahn, 2000). While others have looked at how this perception differs by nationality

¹ These literatures are too vast to survey here. See, for example, Reskin et al (1999) for a survey of the sociology literature, and Altonji and Blank (2000) for a survey of the literature on determinants of the gender wage gap.

and political ideology (see, for example, Alesina and Glaeser, 2004), we believe we are the first to document this consistent gender-based difference in perceptions, and to show that it holds across societies.

We additionally examine gender differences in attitudes in the closely related domain of workplace competition, based on a WVS question that asks subjects whether competition is harmful or beneficial. If success is determined primarily by luck, then the benefit of ‘tournament’-type competition, which should provide incentives to those who work hard, will be relatively low. Niederle and Vesterlund (2006) have already documented that female subjects in laboratory experiments are much more likely to self-select out of competitive situations than male subjects; our contribution is to show that this shows up in the attitudes of subjects across a much broader sample. Consistent with this earlier work, we find that significantly more women report that competition is harmful. Paralleling our earlier results on success and hard work, we also find that this gender difference is more pronounced among those in supervisory positions. In contrast to our success and hard work results, however, we find systematic differences across countries – in more developed countries, there is a *stronger* gender gap in attitudes towards competition.

Our goal here is not to provide definitive analysis of the cycle of discrimination and demotivation that potentially accounts for gender differences in labor market outcomes. We are limited by both our method, which is purely observational, and our source of data, which is based entirely on survey responses. However, the strength of the patterns we observe, and their consistency across a very broad range of socioeconomic circumstances, suggest that this is likely to be an important and useful avenue for future research. This paper serves the purpose of getting these interesting correlations into the public domain.

The rest of the paper is structured as follows: In Section 1, we describe our data; Section 2 presents our empirical findings, and Section 3 provides a concluding discussion.

1. Data

Our primary outcome variables are both drawn from the World Values Survey (WVS), a survey instrument administered in three waves (1981-1984; 1990-93; and 1995-1997) in 80 countries, with at least 1000 survey respondents in each country-wave of data.² The WVS asks questions on a range of social and political themes, and also collects background demographic information on the respondents.³ In what follows, the key variables of interest are derived from questions that ask subjects to place their views on various topics on a scale of one to ten. In the first question of interest, a value of one reflects the view that “In the long run, hard work usually brings a better life” and ten reflects the view that “Hard work doesn't generally bring success -- it's more a matter of luck and connections.” We call this variable *SuccessIsLuck*. Second, we utilize the survey question that asks respondents to give their views on competition, where one reflects the view that “Competition is good. It stimulates people to work hard and develop new ideas” and ten reflects the view that “Competition is harmful. It brings out the worst in people.” We call this variable *CompetitionIsBad*.

We code an indicator variable, *Female*, that denotes the gender of the subject. Additionally, we will be interested in how the relationship between gender and perceptions varies with one's place in the workforce. Specifically, we define an indicator variable, *Supervisor*, which denotes survey respondents who reported under occupation as being: (a) Employer/manager; (b) supervisor and foreman; or (c) supervisory office worker.

We wish to control for other demographic and personal characteristics that are potential confounds for the gender effect. Since women are more likely to hold left-wing political views (Edlund and Pande, 2002), and those with left-wing views are more likely to believe that success is a matter of luck (Alesina and Glaeser, 2004), it is important to control for political ideology. We use the WVS question that asks subjects to rate their political views on a scale of one (“Left”) to ten (“Right”). To control for income we use the respondent's self-reported income

² Not all countries were surveyed in all years.

³ See www.worldvaluessurvey.org for further details.

decile (*Income*), and to control for education, we use the WVS categories, ranging from one (“no formal education”) to nine (“university-level education, with degree”).

Finally, we also examine whether perceptions of the returns to hard work and/or competition differ across countries. We therefore several country characteristics, including the logarithm of 1998 GDP per capita in US dollars (Source: World Development Indicators); the fraction of government representatives in the lower or single house of national government that are women, denoted *%FemaleParliament* (Source: Inter-Parliamentary Union, 2006); and the country’s level of democracy (Source: Polity IV).

We include data from all three waves of the WVS, but limit ourselves to respondents that self-identify as being in the workforce. This reduces the sample by 43 percent, but helps to focus more directly on workplace perceptions that we are most directly interested in. Summary statistics for the full sample are listed in Table 1(A); Table 1(B) shows the difference between male and female responses for a subset of variables. The ‘gender perceptions gaps’ reported in Table 1(B) makes clear that female respondents are both more likely to attribute success to luck and believe that competition is harmful. We now proceed to examine these patterns controlling for other characteristics in a regression framework.

2. Empirical results

Our baseline specification considers the relationship between *SuccessLuck* and *Female*:

$$(1) \text{ SuccessLuck}_i = \alpha_{cy} + \beta_1 * \text{Female}_i + \varepsilon_i$$

where α_{cy} is a country-wave fixed-effect (i.e., up to three fixed effects per country) and ε_i is the error term; in all regressions we report robust standard errors. The results of this initial specification appear in column (1) of Table 2. Consistent with the summary differences reported in Table 1(B), women are significantly more likely to report that success is a matter of luck rather than hard work. The magnitude of the coefficient, 0.29, is approximately ten percent of the

standard deviation of *SuccessLuck*. In column (2), we include the interaction term *Female*Supervisor*. The coefficient on the interaction term, 0.21, is nearly double that of the direct gender effect in this specification, implying that the gender perceptions gap in beliefs about the returns to hard work is nearly double among those in supervisory positions. We include an interaction term with income, *Female*Income*, to ensure that our results on differences across supervisors and non-supervisors is not driven by unobserved income differentials between the two groups. We find the results, reported in column (3), virtually unchanged. Finally, we repeat these regressions including fixed effects for education and for political leanings in columns (4)-(6), and find the results to be unaffected.

As noted in the introduction, if success is determined primarily by luck, then the benefit of ‘tournament’-type competition, which should provide incentives to those who work hard, will be relatively low. This is consistent with the findings of Niederle and Vesterlund (2006); we examine whether there are significant gender differences in attitudes toward competition in our much broader sample (albeit based on survey data, rather than real decisions that they employ in their laboratory experiments). We therefore repeat all regressions from Table 2 using the outcome variable *CompetitionIsBad*; these results are reported in Table 3. We find results for competition that parallel those from our *SuccessLuck* analyses in Table 2, both in terms of magnitude and significance. That is, women are more likely to hold negative views on the merits of competition, and this difference is significantly higher among those in supervisory roles.

Finally, we consider whether these gender differences in perceptions differ across societies. We utilize a parsimonious set of interactions based on countries’ levels of wealth, democracy, and female empowerment (as proxied by the fraction of parliamentarians that are women). In Table 4, we thus add these country-level variables interacted with *Female* as regressors. Interesting, we do not find that any of these interaction terms are significant predictors of *SuccessLuck*, implying that the gender difference in beliefs about the determinants of success is remarkably invariant to a country’s level of economic or social development. However, in the case of *CompetitionisBad*, we do find the interactions to be significantly positive

– that is, in more socially and economically developed countries, there is a *wider* gender gap in perceptions about the benefits of competition. This rather counterintuitive result is an area that warrants further research, and more generally, we hope that more focused studies can help us to develop a more sophisticated understanding of the circumstances and mechanisms that lead to these stark gender differentials.

3. Conclusions

In this paper, we document gender differences in the role of hard work versus luck in getting ahead, and on the merits of competition, using data from the World Values Survey. Women are consistently more likely to report that success is a matter of luck, and hold negative views on the merits of competition. Further, these gender differences are nearly twice as great among survey respondents in supervisory roles.

These differences are important for considering women's roles in the workforce. We argue that these overall patterns are consistent with barriers to females' advancement to higher positions in the workplace hierarchy, but also emphasize that these perceptions on the merits of working hard may themselves serve as a barrier to advancement – if one does not see the merits of hard work and therefore chooses not to exert high effort, advancement is unlikely. While we view our contribution to be quite preliminary – much more work is required to better understand the determinants and evolution of these gender differences – we believe that these patterns provide useful motivation and direction for examining the role of attitudes in explaining gender differences in workplace achievement.

References

Alesina, Alberto, and Edward Glaeser, *Fighting Poverty in the US and Europe: A World of Difference*, Oxford University Press, 2004.

Altonji, Joseph and Rebecca Blank, "Race and gender in the labor market," *Handbook of Labor Economics*, 1999, volume 3, chapter 48, pages 3143-3259.

Blau, Francine, and Lawrence Kahn, "Understanding International Differences in the Gender Pay Gap," *Journal of Labor Economics*, volume 21 (2003), pages 106–144

Edlund, Lena, and Rohini Pande, "Why have Women Become Left-Wing: the Political Gender Gap and the Decline in Marriage" (with Rohini Pande) *Quarterly Journal of Economics*, August 2002, vol. 117, pp. 917-961.

Kunze, Astrid, "The Determination of Wages and the Gender Wage Gap: A Survey", Aug.2000, *IZA Discussion Paper*, No. 193.

Niederle, Muriel, and Lise Vesterlund, "Do Women Shy away from Competition? Do Men Compete too Much?," forthcoming, *Quarterly Journal of Economics*.

Reskin, Barbara, Debra McBrier, and Julie Kmec, "The Determinants and Consequences of the Sex and Race Composition of Work Organizations." *Annual Review of Sociology* 25:335-61, 1999.

Table 1(A) – Summary Statistics

Variable	Mean	Std Dev	Minimum	Maximum	Observations
SuccessLuck	4.43	2.89	1	10	69,417
CompetitionisBad	3.39	2.43	1	10	68,937
Female	0.42	0.49	0	1	70,298
Supervisor	0.25	0.43	0	1	68,380
Income	5.23	2.52	1	10	61,473
log(GDPPCUS)	8.49	1.37	5.61	10.42	62,426
%FemaleParliament	20.12	15.21	0	52.4	62,879
Democracy	7.85	3.12	0	10	53,685

Table 1(B) – Difference in means of attitudes toward competition and hard work

	Female	Male	Gender perceptions gap
	(A)	(B)	(A) - (B)
SuccessLuck	4.64	4.29	0.35
CompetitionisBad	3.56	3.27	0.29
Supervisor	0.23	0.26	-0.03
Income	5.25	5.23	0.02

Variable Definitions: All variables are taken from the World Values Survey unless otherwise noted. Luck is the survey respondent's rating on a 1-10 scale where 1 is "In the long run hard work usually brings a better life" and 10 is "Hard work doesn't generally bring success - it's more a matter of luck and connections." Compete is the survey respondent's rating on a 1-10 scale where 1 is "Competition is good. It stimulates people to work hard and develop new ideas" and 10 is "Competition is harmful. It brings out the worst in people." Female is an indicator variable for gender. Manager is an indicator variable denoting whether the survey respondent reported being in a managerial or supervisory position. Income is the self-reported income decile of the respondent. Log(GDPPCUS) is the logarithm of GDP per capita in 1982 US dollars (Source: World Development Indicators). %FemaleParliament is the fraction of government representatives in the lower or single house of national government that are women (Source: Inter-Parliamentary Union). Democracy is the Polity IV rating of a country's political system, ranging from 1 (dictatorship) to 10 (democracy) (Source: Polity IV).

Table 2 – Gender differences in perceptions on success is a matter of luck or hard work

	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.2874 (0.0214)***	0.2237 (0.0250)***	0.1934 (0.0552)***	0.2440 (0.0303)***	0.1844 (0.0352)***	0.2537 (0.0777)***
Manager		-0.3297 (0.0312)***	-0.2955 (0.0335)***		-0.2623 (0.0441)***	-0.2491 (0.0469)***
Female*Supervisor		0.2103 (0.0498)***	0.2152 (0.0532)***		0.2216 (0.0717)***	0.2475 (0.0760)***
Income			-0.0518 (0.0065)***			-0.0347 (0.0091)***
Female*Income			0.0062 (0.0090)			-0.0107 (0.0124)
Education FE	No	No	No	Yes	Yes	Yes
Political Ideology FE	No	No	No	Yes	Yes	Yes
Observations	122982	67049	58795	122982	67049	58795
R-squared	0.0554	0.0604	0.0665	0.0554	0.0604	0.0665

Dependent variable in all regressions is the survey respondent's rating on a 1-10 scale where 1 is "In the long run hard work usually brings a better life" and 10 is "Hard work doesn't generally bring success - it's more a matter of luck and connections." Female is an indicator variable for gender. Manager is an indicator variable denoting whether the survey respondent reported being in a managerial or supervisory position. Income is the self-reported income decile of the respondent. Education fixed effects are for WVS education categories ranging from one (no formal education) to nine (university education). Political ideology fixed effects are the WVS respondent's self-rating from one (Left) to ten (Right) on the political spectrum. Linear Probability Model. Robust standard errors in parentheses, clustered by country-wave. The dependent variable in all regressions is Decision, an indicator variable that takes on a value of one if a subject desired contact information for a partner. All regressions include country-wave fixed effects, Robust standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 3 – Gender differences in perceptions on whether competition is harmful

	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.305 (0.0184)***	0.248 (0.0216)***	0.175 (0.0483)***	0.281 (0.0262)***	0.234 (0.0307)***	0.153 (0.0691)**
Manager		-0.355 (0.0262)***	-0.296 (0.0281)***		-0.260 (0.0371)***	-0.212 (0.0397)***
Female*Manager		0.2103 (0.0498)***	0.2152 (0.0532)***		0.2216 (0.0717)***	0.2475 (0.0760)***
Income			-0.081 (0.0055)***			-0.069 (0.0078)***
Female*Income			0.017 (0.0079)**			0.019 (0.0109)*
Education FE	No	No	No	Yes	Yes	Yes
Political Ideology FE	No	No	No	Yes	Yes	Yes
Observations	68937	67049	58795	34091	33025	28823
R-squared	0.06	0.06	0.07	0.06	0.06	0.06

Dependent variable in all regressions is the survey respondent's rating on a 1-10 scale where 1 is "Competition is good. It stimulates people to work hard and develop new ideas" and 10 is "Competition is harmful. It brings out the worst in people." Female is an indicator variable for gender. Manager is an indicator variable denoting whether the survey respondent reported being in a managerial or supervisory position. Income is the self-reported income decile of the respondent. Education fixed effects are for WVS education categories ranging from one (no formal education) to nine (university education). Political ideology fixed effects are the WVS respondent's self-rating from one (Left) to ten (Right) on the political spectrum. Linear Probability Model. Robust standard errors in parentheses, clustered by country-wave. The dependent variable in all regressions is Decision, an indicator variable that takes on a value of one if a subject desired contact information for a partner. All regressions include country-wave fixed effects, Robust standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 4 – Cross country differences in the gender perceptions gap in attitudes toward hard work and competition

	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.2071 (0.1636)	0.3045 (0.0432)***	0.15 (0.0819)*	-0.1759 (0.1434)	0.2601 (0.0377)***	0.2054 (0.0692)***
Female*log(GDPPCUS)	0.0092 (0.0185)			0.0573 (0.0162)***		
Female*%FemaleParliament		-0.0006 (0.0017)			0.0029 (0.0014)**	
Female*Democracy			0.0144 (0.0093)			0.0147 (0.0079)*
Dependent Variable	SuccessLuck			CompetitionisBad		
Observations	59803	60247	51753	59409	59851	51438
R-squared	0.078	0.079	0.104	0.060	0.060	0.059

Dependent variable in Specifications (1)-(3) is the survey respondent's rating on a 1-10 scale where 1 is "In the long run hard work usually brings a better life" and 10 is "Hard work doesn't generally bring success - it's more a matter of luck and connections." Dependent variable in specifications (4)-(6) is the survey respondent's rating on a 1-10 scale where 1 is "Competition is good. It stimulates people to work hard and develop new ideas" and 10 is "Competition is harmful. It brings out the worst in people." Female is an indicator variable for gender. Manager is an indicator variable denoting whether the survey respondent reported being in a managerial or supervisory position. Income is the self-reported income decile of the respondent. Income is the self-reported income decile of the respondent. Log(GDPPCUS) is the logarithm of GDP per capita in 1982 US dollars (Source: World Development Indicators). %FemaleParliament is the fraction of government representatives in the lower or single house of national government that are women (Source: Inter-Parliamentary Union). Democracy is the Polity IV rating of a country's political system, ranging from 1 (dictatorship) to 10 (democracy) (Source: Polity IV). Linear Probability Model. Robust standard errors in parentheses, clustered by partner. The dependent variable in all regressions is Decision, an indicator variable that takes on a value of one if a subject desired contact information for a partner. All regressions include country-wave fixed effects, Robust standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.