# Gender Socialization and Stock Market Participation

Chi Liao, Yang Liu, and Lei Lu
University of Manitoba

Abstract

We examine how childhood gender socialization influences the gender gap in stock market participation. Using sibling fixed effects to exploit within-family variation, we find that individuals raised in more male-dominated households, where fathers have higher income or education than mothers, are more likely to invest in stocks. This relationship is stronger for men than for women, indicating that childhood socialization may constrain girls to traditionally feminine tasks, limiting their opportunities to learn about investing. We provide evidence that the primary mechanism driving this relationship is the internalization of masculine characteristics, rather than financial literacy or risk tolerance.

Hypotheses

- Gender roles and attitudes can be shaped by the environment (Bussey and Bandura, 1999).
- Parents are role models for children to observe, learn, and imitate (Black et al., 2017).
- Parents' modeling of gendered behaviors are predictors of children's gender-role attitudes (Halpern and Perry-Jenkins, 2016).
- Traditional views classify business and finance as male-dominated areas (White et al., 1989).
- **H1: Growing up in more male-dominated households, where the father has a higher income or more education than the mother, is positively associated with equity participation and allocation in adulthood.**
- Gender differences in the socialization process (e.g., Bussey and Bandura, 1999; Hyde, 2014).
- Parents reinforce gender socialization by rewarding or discouraging behaviors that align with gender norms.
- Gender norms tend to motivate boys to develop masculine behaviors (Leaper and Friedman, 2007).
- Gender norms constrain girls to feminine functions (Leaper, 2005).
- **H2: The positive effect of growing up in a male-dominated household on stock market participation and allocation is stronger for men than for women.**
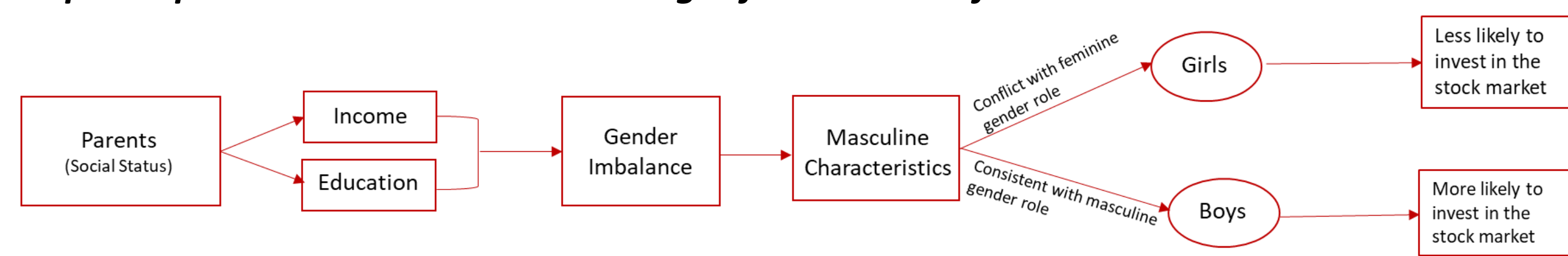
Data and Methodology

❖ **Data:**
The data we used to test our hypotheses is the Panel Study of Income Dynamics (PSID).
- Allows us to measure parental gender imbalance when sample respondents are children (1969-1997).
- Allows observation of investment behavior as well as other demographic and socioeconomic characteristics when those children become adults (1999-2021).

❖ **Variables:**
- **Dependent variables:**
Equity participation: equals 1 if an individual directly invests in stocks, and 0 otherwise
Equity-wealth ratio: value of equity divided by total wealth
- **Independent variables (Duchin et al., 2021):**
Parental income imbalance and parental education imbalance

❖ **Methodology:**

$$Y_{it} = \beta_1 ChildImbal_i + \gamma Controls_{it} + \zeta_{st} + \delta_c + \eta_a + \theta_f + \epsilon_{it} \quad (1)$$

$$Y_{it} = \beta_1 ChildImbal_i + \beta_2 Female_i + \beta_3(Female_i \times ChildImbal_i) + \gamma Controls_{it} + \zeta_{st} + \delta_c + \eta_a + \theta_f + \epsilon_{it} \quad (2)$$

- $\beta_1 + \beta_3$ gives the net effect of gender imbalance on investment behavior for women

Results

	Equity Participation				Equity-Wealth Ratio			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ChildImbal(Inc)	0.0371*** (0.0086)		0.0513*** (0.0103)		0.0200*** (0.0065)		0.0276*** (0.0066)	
ChildImbal(Inc)×Female			-0.0350*** (0.0124)				-0.0206* (0.0109)	
ChildImbal(Edu)		0.0390*** (0.0151)		0.0409*** (0.0152)		0.0300*** (0.0121)		0.0275** (0.0129)
ChildImbal(Edu)×Female				-0.0182** (0.0092)				-0.0202** (0.0101)
High school	-0.0350*** (0.0124)	-0.0179 (0.0143)	-0.0361*** (0.0124)	-0.0186 (0.0142)	0.0272 (0.0212)	0.0064 (0.0262)	0.0285 (0.0213)	0.0059 (0.0258)
College	0.0442*** (0.0105)	0.0489*** (0.0113)	0.0423*** (0.0104)	0.0489*** (0.0113)	-0.0037 (0.0156)	0.0074 (0.0173)	-0.0054 (0.0155)	0.0082 (0.0171)
Married	0.0474*** (0.0070)	0.0472*** (0.0078)	0.0470*** (0.0070)	0.0476*** (0.0078)	-0.0473*** (0.0148)	-0.0385*** (0.0158)	-0.0475*** (0.0148)	-0.0391** (0.0157)
Family size	-0.0171*** (0.0033)	-0.0132*** (0.0038)	-0.0171*** (0.0033)	-0.0134*** (0.0038)	-0.0134** (0.0062)	-0.0128* (0.0067)	-0.0132** (0.0062)	-0.0125* (0.0068)
Female	-0.0145 (0.0093)	-0.0125 (0.0105)	-0.0141 (0.0094)	-0.0118 (0.0105)	-0.0323** (0.0148)	-0.0226 (0.0139)	-0.0293** (0.0146)	-0.0217 (0.0136)
White	0.0574*** (0.0143)	0.0613*** (0.0174)	0.0582*** (0.0143)	0.0620*** (0.0174)	0.0484 (0.0352)	0.0893*** (0.0444)	0.0496 (0.0354)	0.0901** (0.0445)
Black	-0.0440*** (0.0157)	-0.0430*** (0.0192)	-0.0441*** (0.0156)	-0.0422** (0.0192)	0.0023 (0.0439)	0.0454 (0.0531)	0.0039 (0.0440)	0.0453 (0.0533)
Log(Income)	0.0250*** (0.0031)	0.0238*** (0.0035)	0.0247*** (0.0031)	0.0237*** (0.0035)	-0.0077 (0.0050)	-0.0065 (0.0051)	-0.0078 (0.0050)	-0.0071 (0.0051)
Log(Wealth)	0.0936*** (0.0026)	0.0918*** (0.0029)	0.0934*** (0.0026)	0.0917*** (0.0029)				
State-Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cohort fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sibling fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	33,914	29,752	33,914	29,752	6,797	6,040	6,797	6,040
R-squared	0.3831	0.3977	0.3846	0.3980	0.4691	0.4813	0.4697	0.4820

➤ Red rectangles represent the results for H1; Green rectangles represent the results for H2.

Mechanisms

- In this section, we examine several potential mechanisms that may underlie the effect of growing up in a male-dominated household on adult investment behavior, such as financial literacy and risk tolerance. In addition, we test whether learned masculine characteristics may drive our findings.

Panel C: Masculine Characteristics	Equity Participation			Equity-Wealth Ratio		
	Full Sample (1)	Men (2)	Women (3)	Full Sample (4)	Men (5)	Women (6)
Direct Path:						
Path(ChildImbal(Inc) → Equity)	0.0475*** (0.0174)	0.0652*** (0.0205)	0.0115 (0.0248)	0.0195* (0.0114)	0.0434*** (0.0161)	0.0126 (0.0175)
Path(ChildImbal(Edu) → Equity)	0.0557*** (0.0226)	0.0559*** (0.0256)	0.0214 (0.0259)	0.0382*** (0.0150)	0.0324* (0.0170)	0.0053 (0.0265)
Mediated Path:						
Path(ChildImbal(Inc) → Masc)	0.2921*** (0.0734)	0.2933*** (0.0746)	0.2891*** (0.0881)	0.4578*** (0.1330)	0.4801*** (0.1376)	0.3584** (0.1493)
Path(ChildImbal(Edu) → Masc)	0.1936*** (0.0950)	0.1996** (0.0953)	0.0944 (0.1210)	0.2479** (0.1087)	0.2749*** (0.0965)	-0.0094*** (0.0194)
Path(Masc(Inc) → Equity)	0.0324** (0.0137)	0.0539*** (0.0150)	0.0046 (0.0174)	0.0200* (0.0121)	0.0348* (0.0180)	-0.0224 (0.0243)
Path(Masc(Edu) → Equity)	0.0451*** (0.0172)	0.0638*** (0.0236)	0.0209 (0.0170)	0.0252* (0.0142)	0.0264* (0.0160)	0.0114 (0.0237)
Total Indirect Effect:						
Path(ChildImbal(Inc)→Masc) × Path(Masc→Equity)	0.0095** (0.0046)	0.0158** (0.0075)	0.0013 (0.0050)	0.0092 (0.0069)	0.0167 (0.0099)	-0.0080 (0.0093)
Path(ChildImbal(Edu)→Masc) × Path(Masc→Equity)	0.0087* (0.0052)	0.0125* (0.0074)	0.0020 (0.0030)	0.0062 (0.0044)	0.0073 (0.0051)	-0.0010 (0.0017)
Controls and fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8,832	8,832	8,832	2,398	2,398	2,398

➤ We find that childhood gender imbalance is significantly related only to learned masculine characteristics, which, in turn, impacts men's and women's equity participation and allocation to different degrees.

Contributions

- In addition to financial literacy and risk tolerance, we provide a novel explanation for the gender gap in stock market participation: the difference in learned masculine characteristics.

- We provide evidence that gender socialization influences children's stock market participation later in life, highlighting the impact of family gender role attitudes on children's financial behaviors.

Contact

Yang Liu
University of Manitoba
Email: liuy36@myumanitoba.ca
Website: https://sites.google.com/view/yangliuhomepagemain/home?authuser=0
Phone: +1 (431) 998-9686

References

1. Bussey, K., and A. Bandura, 1999. Social cognitive theory of gender development and differentiation. Psychological Review 106, 676–713.
2. Black, S. E., P. J. Devereux, P. Lundborg, and K. Majlesi, 2017. On the origins of risk-taking in financial markets. Journal of Finance 72, 2229–2278.
3. Duchin, R., M. Simutin, and D. Sosyura, 2021. The origins and real effects of the gender gap: Evidence from CEOs' formative years. Review of Financial Studies 34, 700–762.
4. Halpern, H. P., and M. Perry-Jenkins, 2016. Parents' gender ideology and gendered behavior as predictors of children's gender-role attitudes: A longitudinal exploration. Sex Roles 74, 527–542.
5. Hyde, J. S., 2014. Gender similarities and differences. Annual Review of Psychology 65,373–398.
6. Leaper, C., 2005. Parenting girls and boys. In M. H. Bornstein, eds., Handbook of Parenting, 189–225. New Jersey: Lawrence Erlbaum Associates.
7. Leaper, C., and C. K. Friedman, 2007. The socialization of gender. In J. E. Grusec, P. D. Hastings, Eds., Handbook of Socialization: Theory and Research, 561–587. New York: Guilford Press.
8. Ke, D., 2021. Who wears the pants? Gender identity norms and intrahousehold financial decision-making. Journal of Finance 76, 1389–1425.
9. Itzkowitz, J., J. Itzkowitz, and A. Schwartz, 2024. The gender gap in stock market participation: Evidence from stock gifting. Working Paper SSRN 4539694.