

Overconfidence and the Political and Financial Behavior of a Representative Sample

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Abstract

We study the relationship between overconfidence and the political and financial behavior of a nationally representative sample. To do so, we introduce a new method of directly eliciting overconfidence of individuals that is simple to understand, quick to implement, and that captures respondents' excess confidence in their own judgment. Our results show that, in line with theoretical predictions, an excessive degree of confidence in one's judgment is correlated with lower portfolio diversification, larger stock-price forecasting errors, and more extreme political views. Additionally, we find that overconfidence is correlated with voting absenteeism. These results show that overconfidence is a bias that permeates several aspects of peoples' lives (Bosch-Rosa et al. 2021).

In a nutshell: We jointly study how **overconfidence** correlates with the **political and financial behavior** of a **representative sample**.

Definition of Overconfidence

Three types of overconfidence (Moore and Healy 2008):

- Overestimation: overconfidence in one's absolute performance
- Overplacement: overconfidence in one's relative standing
- **Overprecision: excess of confidence in own beliefs**
 - Relates to the second moment of the distribution
 - Variance of $X_i|y_i$ strictly less than variance of X_i given y_i

Theoretical Predictions for Overprecision

Financial Markets: Overprecision leads to

- more **incorrect price predictions** in **financial markets** (e.g., Benos 1998; Odean 1998)
- more **incorrect predictions** in **real estate markets** (Hayunga and Lung 2011)
- more **underdiversified portfolios** (Barber and Odean 2000; Odean 1998)

Political Behavior: Overprecision leads to

- stronger **political extremeness** (Ortoleva and Snowberg 2015)
- **no correlation** with **political inclination** (left/right) in non-election years (Ortoleva and Snowberg 2015)
- higher **likelihood to vote** (Ortoleva and Snowberg 2015)

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Measuring Overprecision: Subjective Error Method

The **Subjective Error Method** (SEM) consists of two questions:

- 1 is a question with a numerical answer (e.g. length of the Nile)
- 2 asks how far away their answer to question (1) is from the true answer.

⇒ **Overprecision** = *realized (true) error* – *reported (subjective) error*

Data: Representative Sample

Innovation Sample of the **German Socio-Economic Panel**.

- 2018 wave: 4,860 respondents across 3,232 households.
 - Specific subset: 902 subjects across 634 households.
 - **Final (representative) sample: 805 subjects across 584 households**
- Seven double-questions on historical events (1938 – 2003).

Seven Historical Questions

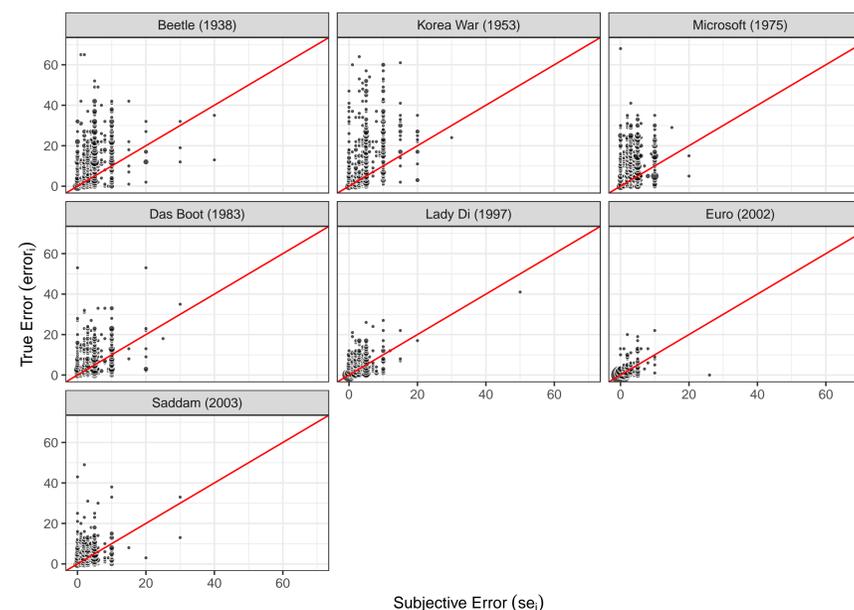


Figure: Relation between the true error ($error_{i,j}$) in the vertical axis and the subjective error ($se_{i,j}$) in the horizontal axis. Any dot above (below) the 45 degree red line is an overprecise (underprecise) answer by the respondent.

Internal consistency: Congeneric reliability (Cho 2016) = .76

⇒ **Standardized aggregate score** across measures using simple mean

Empirical Approach

- **OLS:** vector of controls + overprecision → point estimate of overprecision + p-value
- **R² rank** (Cobb-Clark et al. 2019): rank according to explanatory power of variation
- **LASSO:** overprecision in the set of variables with out-of-sample predictive power

Controls: age, gender, years of education, monthly gross labor income, laborforce status, impulsivity, patience, narcissism, financial literacy, risk aversion, a dummy variable for having lived in the German Democratic Republic in 1989, the number of overprecision questions answered by each respondent, interview date (month and year) fixed effects, state fixed effects, political interest.

Results

	(1) Point estimate	(2) Unadj. p-value	(3) SH p-value	(4) R ² rank	(5) LASSO included	(6) LASSO R ²	(7) N
A Prediction error:							
<i>error stockmarket</i>	1.153**	0.022	0.105	2/38	yes/15	0.15	578
<i>optim. stockmarket</i>	0.091***	0.009	0.061	3/38	yes/11	0.39	578
<i>error rental</i>	0.348*	0.051	0.145	2/38	yes/13	0.07	670
<i>error housing</i>	0.160	0.264	0.458	9/38	no/0	0.00	644
B Portfolio diversification:							
<i>diversification</i>	-0.129***	0.000	0.000	3/38	yes/19	0.13	774
C Ideological Positioning:							
<i>ideol. extremeness</i>	0.091**	0.032	0.122	6/39	yes/13	0.05	716
<i>ideol. inclination</i>	-0.011	0.801	0.801	18/39	no/11	0.07	716
D Voting behavior:							
<i>non voter</i>	0.032***	0.010	0.059	3/39	yes/18	0.14	706

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table: This table shows the baseline results. The number of observations (Column 7) varies due to missing observations in the outcome variable. Column 1: point estimate of the standardized overprecision measure *Sop*; Column 2: unadjusted p-value; Column 3: Sidak-Holm adjusted p-value for multiple hypothesis testing; Column 4: rank of *Sop*; Column 5/6: results of the LASSO procedure.

Conclusion

We study how **overconfidence** correlates with **political/financial behavior**:

- **Subjective Error Method** as a new way to measure overprecision.
- **Confirm predictions from theory** using a **representative sample**.

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