Altruism versus Egoism in Investment Decisions

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33% increase in US market for socially responsible investing (SRI) 2014-2016 – $8.7tn AuM (USSIF (2016))

UNPRI (2016): $> 1,600$ institutional investors signatories; $62tn AuM

Pecuniary and non-pecuniary motives

(Beal et al. (2005); Derwall et al. (2011); Døskeland and Pedersen (2016); Glac (2009); Nilsson (2008, 2009); Riedl and Smeets (2017); Wiesel et al. (2016); Wins and Zwergel (2016))

More recent evidence suggests that political and religious values, as well as social norms significantly impact investment decisions

(Fama and French (2007); Heinkel et al. (2001); Hong and Kacperczyk (2009); Hong and Kostovetsky (2012); Kumar et al. (2011); Peifer (2010))

So far, we have no full understanding why people invest responsibly

Survey of 306 individuals at local citizen service center

- Rate mutual funds (1-10) with different return, risk, and SR characteristics
- Assess individual's altruism and egoism (Schwartz (1992))
- Perceived SRI effectiveness (Nilsson (2008, 2009); Riedl and Smeets (2017))
- Moral obligation to comply with beliefs (Schwartz (1977); Stern et al. (1999))
- Demographics

Linear regression results

	w_{SRI}	w_{SRI}	PSE	Norm
Constant	-0.1093	0.0164	3.9956***	-1.1270*
	(-0.9755)	(0.1671)	(8.1180)	(-1.7384)
PSE	0.0263*	-	-	0.5244***
	(1.9367)	-	-	(7.6438)
Norm	0.0213**	-	-	-
	(2.0214)	-	-	-
Altruism	0.0485***	0.0703***	0.3694***	0.3771***
	(4.5856)	(8.2939)	(8.4398)	(7.1256)
Egoism	-0.0272***	-0.0354***	-0.1669***	-0.0928
	(-2.5967)	(-3.3889)	(-2.7381)	(-1.3025)
Gender	-0.0383	0.0391	0.0299	-0.0186
	(1.4340)	(1.4333)	(0.2188)	(-0.1222)
PercRet	0.0843***	0.0824***	-0.1347*	0.1467*
	(5.0545)	(4.8410)	(-1.8343)	(1.7525)
Age	-0.0019	-0.0023*	-0.0088	-0.0051
	(-1.4883)	(-1.8101)	(-1.5256)	(-0.9496)
InvKH	0.0034	0.0091	0.0742	0.1387**
	(0.2564)	(0.6892)	(1.1600)	(2.0103)
Income	0.0335*	0.0313*	-0.1072	0.0842
	(1.8938)	(1.7343)	(-1.0916)	(0.8137)
R-squared	0.3702	0.3371	0.3071	0.4751

Note:
t-statistics (in parentheses) are derived from heteroscedasticity consistent standard errors (Long and Ervin (2000)). Variance inflation factors (unreported) for all covariates are below 2, suggesting no multicollinearity to be present. ***,** , and * indicate significance at the 1%, 5%, and 10% level, respectively.

Economic Magnitude

Pure effect of altruism on relative importance of SRI in investment decisions

- w_{SRI} increases by 9.70pp for increase in altruism from 25^{th} to 75^{th} percentile

Combined effect $\Rightarrow$ moral obligation activated by perceived SRI effectiveness

- w_{SRI} increases by 14.06pp for increase in altruism from 25^{th} to 75^{th} percentile

- For egoistic individuals, a higher return leads to a higher relative importance of SRI

- For very altruistic individuals, a higher return leads to a lower relative importance of SRI

$\Rightarrow$ "crowding-out" effect
  - extrinsic incentives crowd out intrinsic motivations
  - blood donations, charitable behavior
    (Andreoni and Payne (2011); Ariely et al. (2009); Frey and Jegen (2001); Frey and Oberholzer-Gee (1997); Gneezy and Rustichini (2000a,b); Gneezy et al. (2011))

Conclusion and Implications

- Psychological values can explain socially responsible investment decisions

$\Rightarrow$ relevance of non-pecuniary motives

- Important from academic perspective

- Important for portfolio managers

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Value-Belief-Norm-theory (Stern et al. (1999)) posits a causal chain

- Values determine
- Beliefs
  1. things an individual values are threatened
  2. her behavior can help avert this threat
- Activate Norms

$\Rightarrow$ moral obligation to comply

Explains e.g. household energy consumption, personal car use, climate change strategies, donation behavior (De Groot and Steg (2008); Nilsson et al. (2004); Nordlund and Garvill (2003); Steg et al. (2005))

Hypotheses

H1: Altruistic values are positively linked to the relative importance of social responsibility in investment decisions.

- Intrinsic motivation for SRI (Andreoni (1989, 1990); Beal et al. (2005); Nilsson (2008, 2009); Riedl and Smeets (2017); Wiesel et al. (2016); Wins and Zwergel (2016))

H2: Perceived SRI effectiveness is positively linked to the relative importance of social responsibility in investment decisions.

- More SRI holdings (Nilsson (2008); Riedl and Smeets (2017))

H3: Norms are positively linked to the relative importance of social responsibility in investment decisions.

- Norms have a significant impact on investments (e.g., Hong and Kacperczyk (2009); Hong and Kostovetsky (2012))

Hypotheses II

H4: The link between altruistic values and the relative importance of social responsibility in investment decisions is mediated by perceived SRI effectiveness and norms.

- Beliefs and norms mediate link between values and proenvironmental behavior (e.g., Stern et al. (1999))

H5: Egoistic values are negatively related to the relative importance of social responsibility in investment decisions.

- "Profit-seekers" do not benefit from doing good (Derwall et al. (2011); Riedl and Smeets (2017))

H6: The link between egoistic values and the relative importance of social responsibility in investment decisions is moderated by the perception of the financial performance of SRI.

- High perceived returns as motive for SRI (Døskeland and Pedersen (2016))

Composition

1. Reduced form of Schwartz (1992) value inventory: altruism and egoism
2. Measurement of Investor Preferences $\Rightarrow$ Conjoint Analysis
3. Investment Knowledge, SRI Assessment (Risk, Return, Effectiveness)
4. Norm Elicitation
5. Demographics

Local citizen center $\Rightarrow$ representative sample

University town

No apparent selection bias

Descriptive Statistics

306 Respondents

Mean age: 34.6

Measure	Value	%
Gender	Female	52.1
	Male	47.9
Education	High school	23.5
	University	42.5
Occupation	Employee	43.8
	Undergoing Education	27.5
Net Income	<1,499€	52.3
	1,500-3,499€	35.0
Marital Status	Single	62.4
	Married	31.7

Perceived Return and Risk of SRI

Return perception	%	Risk perception	%
Much lower	4.60	A lot less risky	3.30
Lower	43.80	Less risky	27.50
About the same	36.60	About the same	54.20
Higher	12.10	More risky	14.40
Much higher	2.60	A lot more risky	0.30
Total	**99.70**	**Total**	**99.70**
(Missing)	(0.30)	(Missing)	(0.30)

Self-assessed financial literacy

Measure	Value	#	%
Investment know-how	Poor	141	46.1
	Average	87	28.4
	Good	78	25.5
Investment time	None	195	63.7
	<1 year	4	1.3
	1-3 years	29	9.5
	3-5 years	23	7.5
	5-10 years	19	6.2
	>10 years	36	11.8
SRI awareness	No	109	35.6
	Yes	197	64.4

Computing Relative Importance Weights

$$U_j = w_{1j} \times Return + w_{2j} \times Risk + w_{3j} \times Social\ Responsibility \quad (1)$$

For participant j, with U_{ij}^{max} and U_{ij}^{min} reflecting the estimated part-worths of the most and least desired level of attribute i, the relative importance weight is

$$w_{ij} = \frac{U_{ij}^{max} - U_{ij}^{min}}{\sum_{i=1}(U_{ij}^{max} - U_{ij}^{min})} \quad (2)$$

Mean utility function:

$$Utility = 24.89\% \times Return + 26.75\% \times Risk + 48.36\% \times Social\ Responsibility$$

Do Altruism and Egoism affect the Investment Decision?

$$PSE = \beta_{0,PSE} + \beta_1 \times Altruism + \beta_2 \times Egoism + \beta_3 \times Gender + \beta_4 \times PercRet + \beta_5 \times Age + \beta_6 \times InvKH + \beta_7 \times Income + \epsilon_{PSE} \quad (3)$$

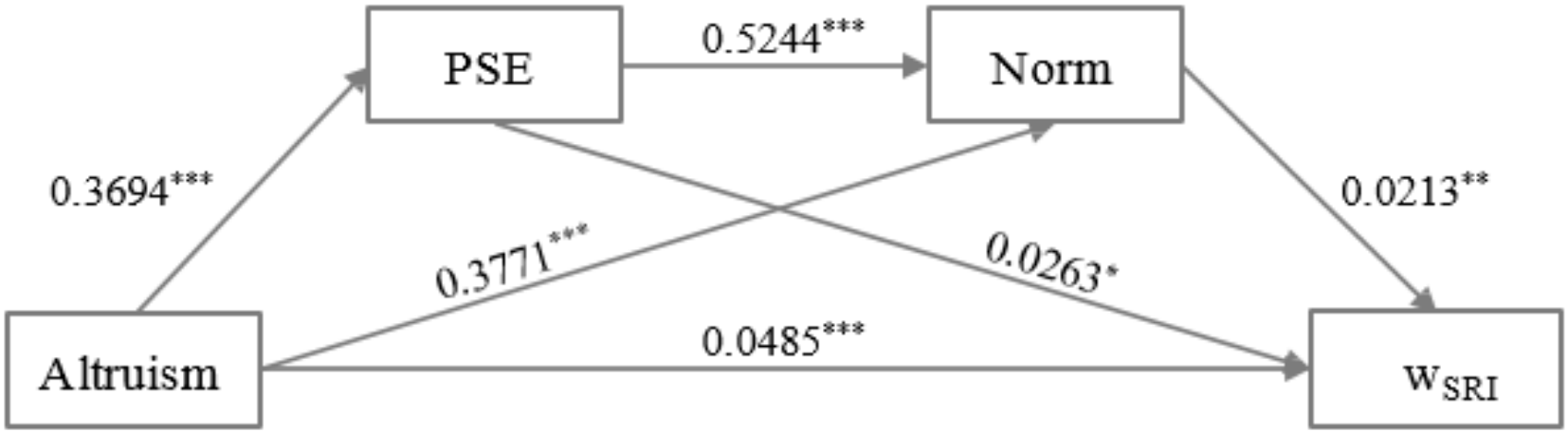
$$Norm = \beta_{0,Norm} + \beta_1 \times PSE + \beta_2 \times Altruism + \beta_3 \times Egoism + \beta_4 \times Gender + \beta_5 \times PercRet + \beta_6 \times Age + \beta_7 \times InvKH + \beta_8 \times Income + \epsilon_{Norm} \quad (4)$$

$$w_{SRI} = \beta_{0,w_{SRI}} + \beta_1 \times PSE + \beta_2 \times Norm + \beta_3 \times Altruism + \beta_4 \times Egoism + \beta_5 \times Gender + \beta_6 \times PercRet + \beta_7 \times Age + \beta_8 \times InvKH + \beta_9 \times Income + \epsilon_{w_{SRI}} \quad (5)$$

+

Total Effect Model without inclusion of PSE & Norm to assess mediation (Baron and Kenny (1986); Zhao et al. (2010))

Visualization of Causal Chain



Note: Adapted causal chain from the Value-Belief-Norm theory (Stern et al. (1999)). The effect of altruism on w_{SRI} is mediated through perceived SRI effectiveness (PSE) and Norm.
The total effect coefficient is the sum of the product of all paths:
$0.0485 + 0.3694 \times 0.5244 \times 0.0213 + 0.3771 \times 0.0213 + 0.3694 \times 0.0263 = 0.0703$.
Coefficients are obtained from the linear regressions as specified above.

***,** , and * indicate significance at the 1%, 5%, and 10% level, respectively.

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- w_{SRI} increases by 9.70pp for increase in altruism from 25th to 75th percentile[1]

Combined effect: moral obligation activated by perceived SRI effectiveness

- w_{SRI} increases by 14.06pp for increase in altruism from 25th to 75th percentile[2]

[1] Level of altruism changes by 2 from 25th to 75th percentile. This factor is multiplied with the coefficient of the direct effect of altruism on w_{SRI}, 0.0485.

[2] Level of altruism changes by 2 from 25th to 75th percentile. This factor is multiplied with the coefficient of the total effect of altruism on w_{SRI}, 0.0703.

Egoism, Altruism, and SRI return perception

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