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Drinking is Different! Examining the Role of Locus of Control for Alcohol Consumption

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Drinking in New Zealand

Motivation

- Alcohol consumption associated with high macro- and microeconomics costs for societies and individual
  - Explaining determinants of alcohol consumption important in enabling policymakers to tackle the unwanted costs
- Moderate alcohol consumption still largely accepted behavior (unlike other practices of unhealthy behavior)

$\Rightarrow$ Drinking is different!

- Uncertainty - Insufficent subjective link between current behavior and future health consequences
- Potentially important role of perceptions and expectations

This Paper in a Nutshell

Contribution

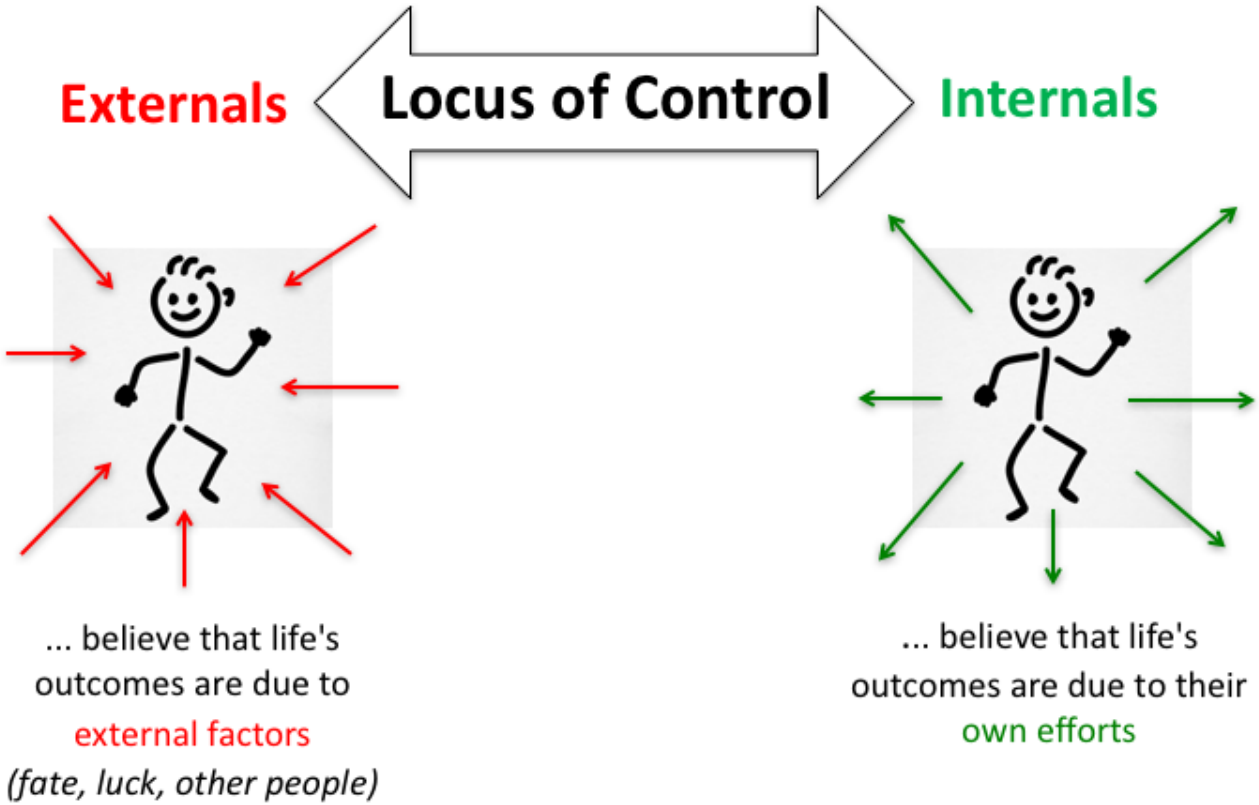
Detailed investigation of the relationship between personality trait locus of control and alcohol consumption

- Approach: Empirical reduced-form analysis using German survey data from the SOEP
- Results:
  - Significant positive and robust relationship between an internal LOC and probability of moderate and regular alcohol consumption
  - Strong contradiction to existing theoretical and empirical evidence on other health-related behavior (smoking, exercise, diet)
- Mechanisms:
  1. Investments into social networks
  2. Perception of risks associated to drinking

Locus of Control

Definition - Rotter (1966)

"A generalized [...] belief [...] regarding the nature of the causal relationship between one's own behavior and its consequences."



Locus of Control and Behavioral Outcomes

- **Economic Relevance -** High explanatory power for economic behavior and decision making
  - *e.g. labor force participation, regional mobility, human capital investments, occupational attainment, job search, investment decisions*
- Cobb-Clark et al. 2014 - Healthy habits: The connection between diet, exercise, and locus of control, *JEBO*.
  - Data from the Australian Household Panel Study (HILDA)
  - Positive effect of an internal LOC on healthy habits such as regular exercise, healthy diet and non-smoking
  - Differences in subjective returns to investments into health as main channel
  - **BUT!** - Significant positive effect of an internal LOC on binge drinking

Data

- Survey data - German Socio-Economic Panel SOEP
- Sample: All individuals between 20 and 70 years in the three waves (2006,2008 and 2010) ▸ Descriptives

	All	Men	Women
Demographic Controls			
Female	0.52		
Age	46.63	46.92	46.37
German Nationality	0.94	0.94	0.94
East-Germany	0.27	0.27	0.27
Number of Children in HH	0.48	0.47	0.50
Married	0.65	0.65	0.64
Net Household Income in KEUR	2.96	3.03	2.90
Observations	36,023	17,375	18,648
Individuals	15,461	7,471	7,990

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.

Data - Alcohol Consumption

- Alcohol Consumption - Ordinal measure based on self-assessed levels of consumption of beer, wine, spirits and mixed drinks
  - Abstainers - No consumption of all four types
  - Rare Drinkers - Seldom drinking for at least one type but no occasional consumption
  - Moderate Drinkers - Occasional drinking for at least one type but no regular consumption
  - Regular Drinkers - Regular drinking for at least one type

	All	Men	Women
Alcohol Consumption			
Abstainers	0.12	0.08	0.15
Rare Drinkers	0.29	0.21	0.36
Moderate Drinkers	0.42	0.44	0.40
Regular Drinkers	0.18	0.27	0.09

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.

Data - Locus of Control (Measurement)

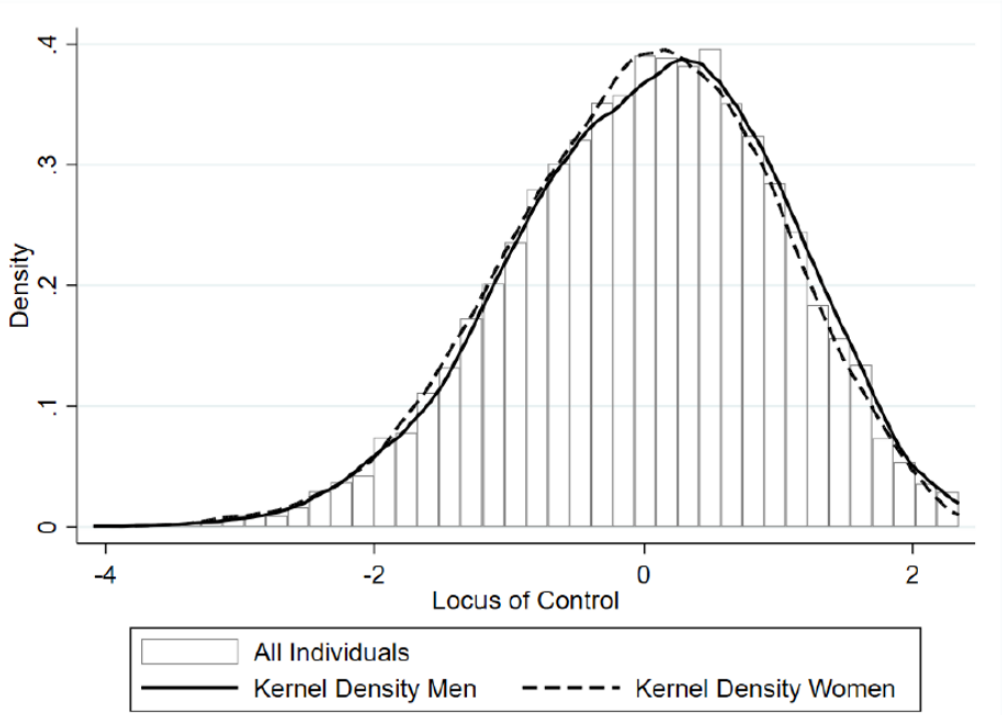
- List of 10 items rate on a 7-point Likert-scale

No	Item	All	Men	Women
Q:	The following statements apply to different attitudes towards life and the future. To what degree do you personally agree with the following statements? *Scale: 1 (Disagree completely) - 7 (Agree completely)*			
I1:	How my life goes depends on me	5.42	5.43	5.41
I2:	Compared to other people, I have not achieved what I deserve (-)	3.27	3.35	3.20***
I3:	What a person achieves in life is above all a question of fate or luck (-)	3.45	3.38	3.50***
I4:	If a person is soc. or polit. active, she can have an effect on soc. conditions[b]	3.77	3.78	3.78
I5:	Other people have a controlling influence over my life (-)	3.15	3.19	3.11***
I6:	One has to work hard in order to succeed	5.93	5.94	5.93
I7:	If I run up against difficulties in life, I often doubt my own abilities (-)	3.19	2.93	3.43***
I8:	Opportunities that I have in life are determined by social conditions (-)	4.50	4.44	4.55***
I9:	Inborn abilities are more important than any efforts one can make[b]	4.73	4.77	4.71
I10:	I have little control over the things that happen in my life (-)	2.69	2.69	2.63***
	Observations[a]	12,121	5,738	6,126

Source: SOEP, waves 2005 and 2010, version 33, doi:10.5684/soep.v33.
Notes: Items marked with a (-) are reversed prior to factor analysis.
Significance stars refer to significance level of t-test for mean equivalence between men and woman: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Data - Locus of Control (Construction)

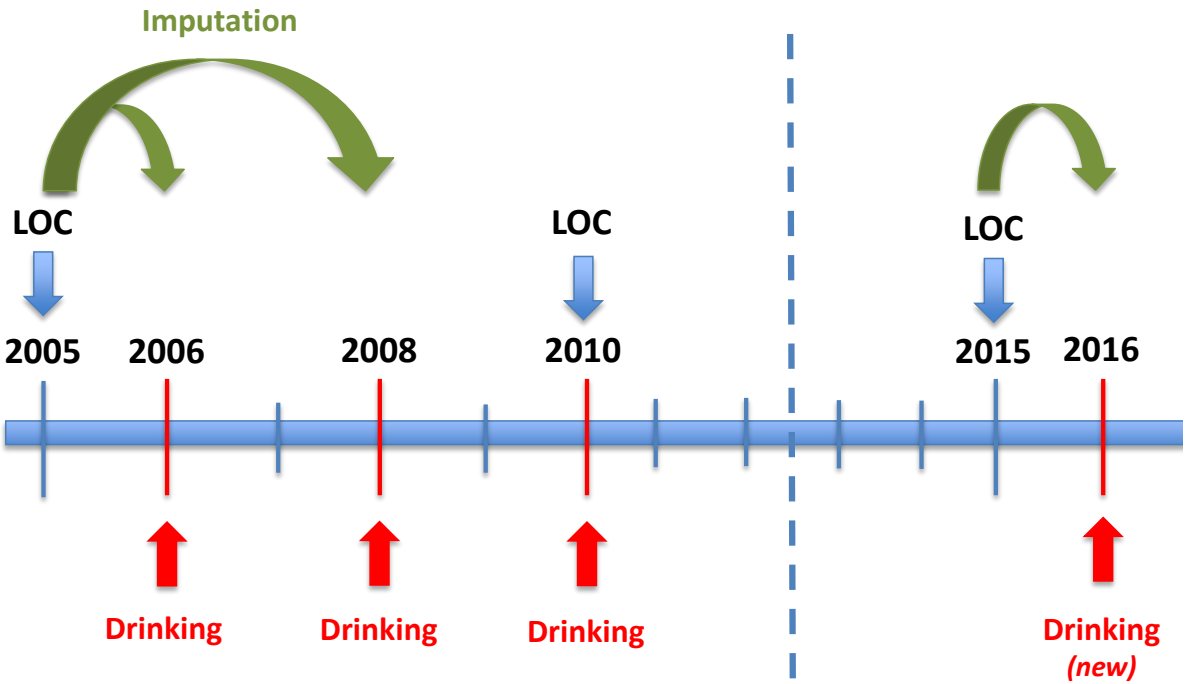
- Construction of a unidimensional factor LOC_{it} ▶ Factor Analysis



Source: SOEP, waves 2005 and 2010, version 33, doi:10.5684/soep.v33, own illustration.

Identification

- Panel data treated as pooled cross-sections *(with clustered SE)*
  - Identification via within and between variation
  - Assumption - No (or very low) within variation due to stability of LOC ▸ Robustness Checks
- LOC imputed forward from 2005 to 2006 and 2008



Estimation Approach I

- Ordinal choice model - Ordered logit estimation
  - $\Rightarrow$ Brant test for parallel regressions - strong violation of the proportional odds assumption
- Splitting the ordinal variable into three binary indicators
  - Investigation of the non-parallel effects (at the extensive and intensive margin)

Drinking Indicator	Never	Rare	Moderate	Regular
D_1 Moderate + Regular	$D_1 = 0$	$D_1 = 0$	$D_1 = 1$	$D_1 = 1$
D_2 Moderate	$D_2 = 0$	$D_2 = 0$	$D_2 = 1$	missing
D_3 Regular	$D_3 = 0$	$D_3 = 0$	missing	$D_3 = 1$

Estimation Approach II

- Binary choice model - Logit estimation

$$P(D_{it} = 1) = P(\beta_1 + \beta_2 loc_{it} + \beta_3 C_{it} + \beta_3 P_i + \beta_4 H_{it} + \beta_5 T + \epsilon_{it} > 0),$$

  - Socio-economic control variables (C_{it})
    - Demographic/ social background (gender, age, nationality, region, # of children in the HH, family status, net HH income),
    - Educational controls (school, vocational and university degree),
    - Labor market controls (gross labor income, labor force status and occupational autonomy)
  - Personality and preferences (P_i)
    - Big Five,
    - General and health-related risk aversion, time preferences (patience and impulsiveness)
  - Health (H_{it})
    - Health condition (disability-status, subjective health and BMI)
    - Health-related behavior (smoking, healthy diet and exercise)
  - Period-fixed effects (T)

Results - Binary Choice (Logit, Marginal Effects)

	Full Sample		Selected Samples			
	Moderate/Regular Drinking D_1		Moderate Drinking D_2 *(vs. Non/Rare)*		Regular Drinking D_3 *(vs. Non/Rare)*	
	(1)	(2)	(3)	(4)	(5)	(6)
Men						
LOC Factor (cont.)	0.014***		0.017***		0.010	
	(0.005)		(0.006)		(0.007)	
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)						
$(LOC_{P33}, LOC_{P66}]$		0.027***		0.026**		0.042***
		(0.010)		(0.012)		(0.015)
$(LOC_{P66}, LOC_{max}]$		0.031***		0.036***		0.034**
		(0.011)		(0.014)		(0.016)
Observations	17,375	17,375	12,680	12,680	9,758	9,758
Women						
LOC Factor (cont.)	0.015***		0.015***		0.007	
	(0.005)		(0.005)		(0.005)	
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)						
$(LOC_{P33}, LOC_{P66}]$		0.016		0.015		0.006
		(0.010)		(0.011)		(0.010)
$(LOC_{P66}, LOC_{max}]$		0.036***		0.039***		0.015
		(0.012)		(0.012)		(0.011)
Observations	18,648	18,648	16,961	16,961	11,131	11,131

▸ Ordinal - Stepwise ▸ Intensive Margin ▸ Personality and Preferences

Results - Binary Choice (Logit, Marginal Effects)

	Full Sample		Selected Samples			
	Moderate/Regular Drinking D_1		Moderate Drinking D_2 *(vs. Non/Rare)*		Regular Drinking D_3 *(vs. Non/Rare)*	
	(1)	(2)	(3)	(4)	(5)	(6)
Men						
LOC Factor (cont.)	0.014***		0.017***		0.010	
	(0.005)		(0.006)		(0.007)	
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)						
$(LOC_{P33}, LOC_{P66}]$		0.027***		0.026**		0.042***
		(0.010)		(0.012)		(0.015)
$(LOC_{P66}, LOC_{max}]$		0.031***		0.036***		0.034**
		(0.011)		(0.014)		(0.016)
Observations	17,375	17,375	12,680	12,680	9,758	9,758
Women						
LOC Factor (cont.)	0.015***		0.015***		0.007	
	(0.005)		(0.005)		(0.005)	
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)						
$(LOC_{P33}, LOC_{P66}]$		0.016		0.015		0.006
		(0.010)		(0.011)		(0.010)
$(LOC_{P66}, LOC_{max}]$		0.036***		0.039***		0.015
		(0.012)		(0.012)		(0.011)
Observations	18,648	18,648	16,961	16,961	11,131	11,131

▸ Ordinal - Stepwise ▸ Intensive Margin ▸ Personality and Preferences

Robustness Checks

- Subjective reporting vs. objective measure of consumption
  - Data: Self-reported consumption amounts and frequencies measured in drinking episodes per week and drinks per episode available in SOEP wave 2016
  - Results:
    - Robust significant positive effect on moderate and high drinking frequencies (2+ drinking episodes per week)
    - Positive effect on high drinking amounts (5+ drinks per episode) for a very high LOC and for men only
- Attenuation bias and reverse causality - Alternative construction and imputation of LOC variable

Discussion - Social Investment Theory

- Drinking strongly connected to social interactions / social events
  - Peer effects of alcohol use in adolescence (Argys and Rees, 2008)
  - Negative penalties to abstinence with respect to social integration (Leifman et al., 1995)

  $\Rightarrow$ Moderate drinking produces social capital
- Positive effect of an internal LOC on investment into future outcomes (Caliendo et al., 2015; Coleman and DeLeire, 2003; Cobb-Clark et al., 2014)

  $\Rightarrow$ Internals are expected to invest more into social networks

$\Rightarrow$ Hypothesis: Internals drink more while attending social events.

- Consequences - Positive economic and medical outcomes of moderate drinking

Social Investment Theory - Empirical Evidence

- Significant drop in effect sizes when information on social leisure activities is included as controls

	Men		Women	
	(1)	(2)	(3)	(4)
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)				
$(LOC_{P33}, LOC_{P66}]$	0.025**	0.019*	0.013	0.004
	(0.010)	(0.010)	(0.011)	(0.010)
$(LOC_{P66}, LOC_{max}]$	0.032***	0.023**	0.038***	0.028**
	(0.011)	(0.011)	(0.012)	(0.012)
Going out Eating/Drinking (Ref.: Never)				
Rarely		0.098***		0.084***
		(0.022)		(0.020)
Min 1x per month		0.143***		0.145***
		(0.023)		(0.021)
Weekly or more		0.171***		0.178***
		(0.024)		(0.023)
Observations	16,986	16,986	18,243	18,243
Demographics	✓	✓	✓	✓
Education	✓	✓	✓	✓
Labor Market	✓	✓	✓	✓
Personality	✓	✓	✓	✓
Health	✓	✓	✓	✓

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.
Notes: Clustered Standard Errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Theoretical Considerations - Risk Perception

- Uncertainty about link between drinking and health outcomes
  - Positive effects of light and moderate alcohol consumption on physical and mental health (Grønbæk 2009)
  - Individuals do not view alcohol as affecting health (Bennett et al. 1998)
- Important effect of LOC on perceptions about personal risk
  - Internals are more likely to report a lower personal risk of having drinking problems (Hoorens and Buunk 1993)
  - Strong link between internal LOC and risky as well as inconsistent investment decisions (Salamanca et al. 2016; Pinger et al. 2018)

$\Rightarrow$ Hypothesis: Internal LOC linked to higher belief about the ability to cope with and prevent the consequences of drinking

- Negative consequences - negative economic and medical outcomes of uncontrolled/heavy drinking

Risk Perception - (Indirect) Empirical Evidence

- Indirect Identification: Interaction of risk aversion and LOC in their effects on drinking
  - Idea: If willingness to take risks is high, a change in the risk perceptions (i.e. LOC) has a smaller effect on behavior.

	Men		Women	
	Averse	Seeking	Averse	Seeking
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)				
$(LOC_{P33}, LOC_{P66}]$	0.042***	0.004	0.021	0.012
	(0.014)	(0.014)	(0.015)	(0.015)
$(LOC_{P66}, LOC_{max}]$	0.052***	0.006	0.040**	0.033*
	(0.016)	(0.016)	(0.016)	(0.017)
Observations	9,238	8,137	9,657	8,991
Demographics	✓	✓	✓	✓
Education	✓	✓	✓	✓
Labor Market	✓	✓	✓	✓
Personality	✓	✓	✓	✓
Health	✓	✓	✓	✓

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.
Notes: Clustered Standard Errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Conclusion

Locus of control matters!

Significant positive and robust relationship between an internal LOC and moderate and regular alcohol consumption.

Drinking is different!

Alcohol consumption is a highly multifaceted investment decision subject to a high amount of uncertainty, especially depending on the consumption intensity and occasion.

THANK YOU FOR YOUR ATTENTION!

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Comments and Feedback are highly welcome.

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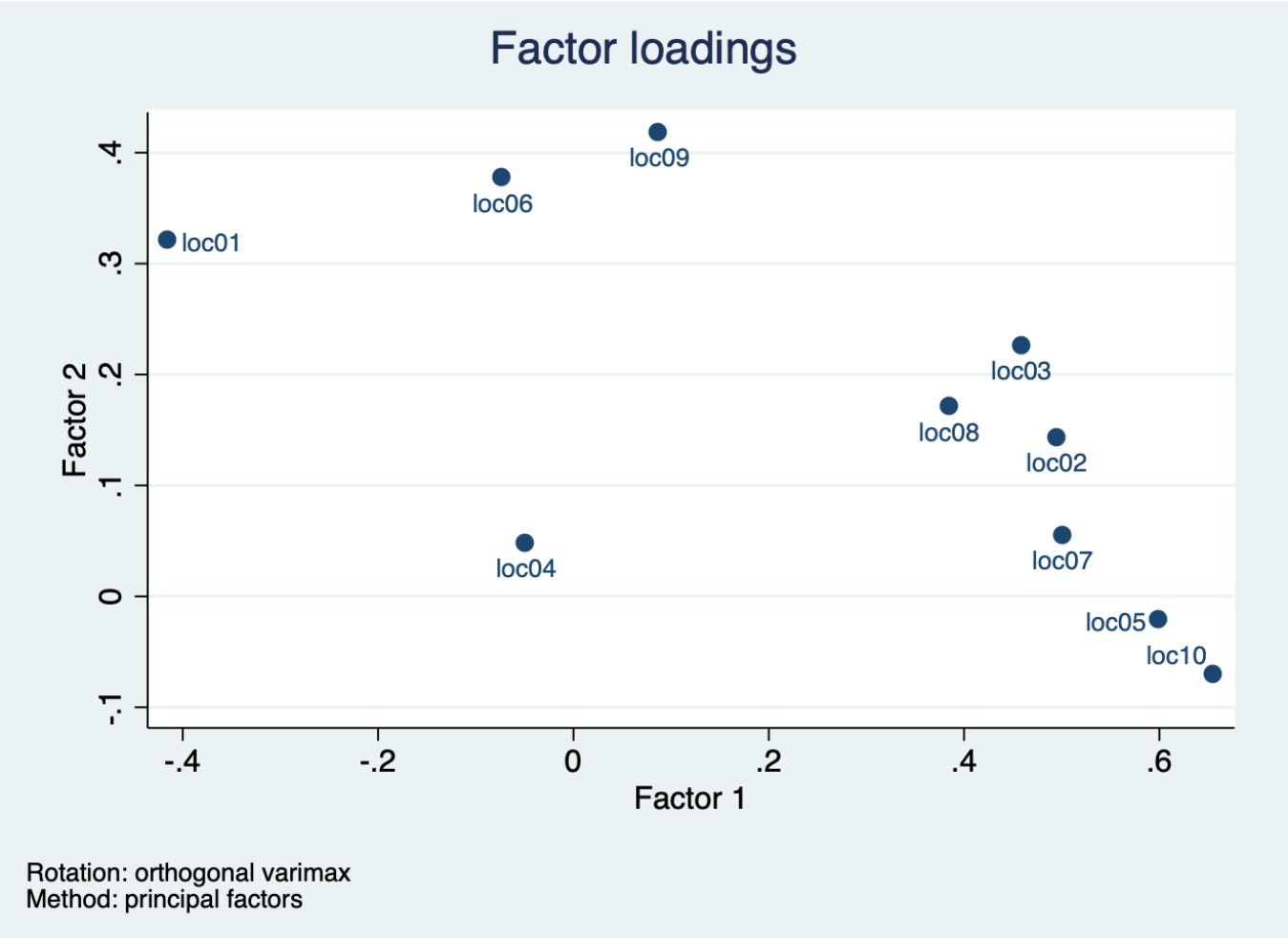
Go back to Data

Figure: Factor Loadings of the LOC Variable



Source: SOEP, waves 2005 and 2010, version 33, own illustration.

Go back to Data

	All	Men	Women
Educational Controls			
Highest School Degree			
No School Degree	0.02	0.02	0.02
Lower Secondary School	0.30	0.32	0.28
Intermediary School	0.33	0.29	0.36
Highschool	0.30	0.32	0.28
Other School	0.06	0.06	0.06
Highest Vocational Degree			
No Vocational Diploma	0.17	0.15	0.20
Apprenticeship	0.45	0.47	0.43
Higher Technical College	0.25	0.24	0.26
College or University Degree	0.24	0.26	0.22
Observations	36,023	17,375	18,648
Individuals	15,461	7,471	7,990

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.

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	All	Men	Women
Labor Market Controls			
Gross Labor Income in KEUR	1.74	2.38	1.14
Occupational Autonomy			
Low	0.34	0.28	0.39
Medium	0.26	0.28	0.24
High	0.22	0.18	0.25
Labor Force Status			
Employed	0.06	0.06	0.06
Self-Employed	0.59	0.63	0.56
Unemployed	0.07	0.09	0.05
Not-Working	0.06	0.01	0.10
Pensioneer	0.18	0.18	0.17
In Education	0.02	0.02	0.02
Military Service	0.00	0.00	0.00
Maternity Leave	0.02	0.00	0.03
Observations	36,023	17,375	18,648
Individuals	15,461	7,471	7,990

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.

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	All	Men	Women
Personality Controls			
Conscientiousness (avg.)	5.88	5.81	5.94
Extraversion (avg.)	4.81	4.68	4.93
Agreeableness (avg.)	5.37	5.19	5.53
Neuroticism (avg.)	3.86	3.61	4.10
Openness (avg.)	4.49	4.40	4.58
Willingness to take risk (general) (avg.)	4.51	4.95	4.10
Willingness to take health risk (avg.)	2.98	3.34	2.65
Patience (avg.)	6.11	6.11	6.12
Impulsiveness (avg.)	5.12	4.98	5.25
Observations	36,023	17,375	18,648
Individuals	15,461	7,471	7,990

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.

Go back to Data

	All	Men	Women
Health Controls			
Disabled	0.11	0.13	0.10
In Bad Health	0.16	0.15	0.17
Body Mass Index (imputed)	26.13	26.92	25.40
Smoking			
Non	0.70	0.67	0.74
Light	0.17	0.16	0.17
Heavy	0.13	0.17	0.09
Healthy Diet			
Non	0.06	0.09	0.03
Moderate	0.86	0.86	0.86
Strong	0.08	0.05	0.11
Exercise			
Non	0.34	0.34	0.34
Moderate	0.28	0.30	0.26
Strong	0.38	0.36	0.39
Observations	36,023	17,375	18,648
Individuals	15,461	7,471	7,990

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.

▸ Go back to Results

	Outcome Variable: Categorical Drinking Variable							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Men								
LOC Factor (cont.)	0.074***	0.065***	0.067***	0.059***				
	(0.020)	(0.020)	(0.021)	(0.021)				
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)								
$(LOC_{P33}, LOC_{P66}]$					0.166***	0.150***	0.147***	0.133***
					(0.044)	(0.044)	(0.045)	(0.045)
$(LOC_{P66}, LOC_{max}]$					0.167***	0.150***	0.153***	0.142***
					(0.046)	(0.046)	(0.049)	(0.049)
Observations	17,375	17,375	17,375	17,375	17,375	17,375	17,375	17,375
Brant Test								
chi2	447.7	530.4	601.1	754.5	436.2	522.0	595.1	751.0
$p > chi2$	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Year Fixed-Effects	✓	✓	✓	✓	✓	✓	✓	✓
Demographics	✓	✓	✓	✓	✓	✓	✓	✓
Education	✓	✓	✓	✓	✓	✓	✓	✓
Labor Market		✓	✓	✓		✓	✓	✓
Personality			✓	✓			✓	✓
Health				✓				✓

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.
Notes: Clustered Standard Errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Full estimation results for column (4)

▸ Women

▸ Go back to Results ▸ Go back to Men

	Outcome Variable: Categorical Drinking Variable							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Women								
LOC Factor (cont.)	0.118***	0.109***	0.104***	0.070***				
	(0.019)	(0.019)	(0.021)	(0.021)				
$(LOC_{P33}, LOC_{P66}]$					0.164***	0.152***	0.138***	0.073*
					(0.042)	(0.042)	(0.042)	(0.042)
$(LOC_{P66}, LOC_{max}]$					0.244***	0.230***	0.218***	0.150***
					(0.045)	(0.045)	(0.048)	(0.048)
Brant Test								
chi2 2	647.1	751.3	789.5	985.9	644.9	751.8	789.5	987.9
$p > chi2$	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Year Fixed-Effects	✓	✓	✓	✓	✓	✓	✓	✓
Demographics	✓	✓	✓	✓	✓	✓	✓	✓
Education	✓	✓	✓	✓	✓	✓	✓	✓
Labor Market		✓	✓	✓		✓	✓	✓
Personality			✓	✓			✓	✓
Health				✓				✓

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.
Notes: Clustered Standard Errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Full estimation results for column (4)

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Table A.6: Main Results (Logit, Marginal Effects) - Binary Drinking Indicators

	Extensive Margin		**Intensive Margin**	
	Moderate/Regular Drinking D_1		Regular Drinking *(vs. Moderate)*	
	(1)	(2)	(3)	(4)
Men				
LOC Factor (cont.)	0.014***		-0.005	
	(0.005)		(0.006)	
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)				
$(LOC_{P33}, LOC_{P66}]$		0.027***		0.017
		(0.010)		(0.013)
$(LOC_{P66}, LOC_{max}]$		0.031***		0.003
		(0.011)		(0.014)
Observations	17,375	17,375	12,312	12312
Women				
LOC Factor (cont.)	0.015***		-0.001	
	(0.005)		(0.005)	
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)				
$(LOC_{P33}, LOC_{P66}]$		0.016		0.005
		(0.010)		(0.011)
$(LOC\_P66, LOC\_max]$		0.036***		0.005
		(0.012)		(0.013)
Observations	18,648	18,648	9,204	9204

▸ Go back to Results

	Men			Women		
	Mod./Reg. D_1	Moderate D_2	Regular D_3	Mod./Reg. D_1	Moderate D_2	Regular D_3
	(1)	(2)	(3)	(1)	(2)	(3)
LOC Factor (cont.)	0.014***	0.017***	0.010	0.015***	0.015***	0.007
	(0.005)	(0.006)	(0.007)	(0.005)	(0.005)	(0.005)
Personality						
Conscientiousness (avg.)	-0.005	-0.004	-0.010	-0.033***	-0.031***	-0.022***
	(0.006)	(0.007)	(0.008)	(0.006)	(0.006)	(0.005)
Extraversion (avg.)	0.022***	0.018***	0.037***	0.028***	0.027***	0.015***
	(0.006)	(0.007)	(0.008)	(0.006)	(0.006)	(0.006)
Agreeableness (avg.)	-0.008	0.005	-0.031***	0.008	0.010	-0.002
	(0.005)	(0.007)	(0.008)	(0.006)	(0.006)	(0.006)
Neuroticism (avg.)	0.003	0.005	-0.005	0.004	0.003	0.001
	(0.006)	(0.007)	(0.009)	(0.006)	(0.006)	(0.005)
Openness (avg.)	-0.010*	-0.006	-0.020**	0.005	0.003	0.005
	(0.006)	(0.007)	(0.008)	(0.006)	(0.006)	(0.005)
Willingness to take general risk (avg.)	0.014*	0.018**	0.010	0.022***	0.026***	-0.001
	(0.007)	(0.009)	(0.011)	(0.007)	(0.008)	(0.007)
Willingness to take health risk (avg.)	0.015**	0.015**	0.022**	0.014**	0.011	0.018***
	(0.006)	(0.007)	(0.009)	(0.006)	(0.007)	(0.006)
Patience (avg.)	-0.013**	-0.012*	-0.024***	-0.011**	-0.008	-0.012**
	(0.005)	(0.007)	(0.008)	(0.005)	(0.006)	(0.005)
Impulsiveness (avg.)	-0.009	-0.012*	-0.009	0.003	-0.002	0.012**
	(0.006)	(0.007)	(0.008)	(0.006)	(0.006)	(0.005)
Observations	17375	12680	9758	18648	16961	11131

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.
Notes: Clustered Standard Errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Go back to Robustness

	Men	Women
(1) Alternative Indicators		
Abstainer *(vs. All Other Outcomes)*		
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)		
$(LOC_{P33}, LOC_{P66}]$	-0.016**	-0.009
	(0.006)	(0.007)
$(LOC_{P66}, LOC_{max}]$	-0.023***	-0.016**
	(0.007)	(0.008)
Observations	17,375	18,648
All Controls	✓	✓

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.
Notes: Clustered Standard Errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Go back to Robustness

	Men	Women
(2) Objective Measure 2016		
(a) Moderate or High Consumption Frequency		
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)		
$(LOC_{P33}, LOC_{P66}]$	0.016	0.032**
	(0.019)	(0.015)
$(LOC_{P66}, LOC_{max}]$	0.032	0.033**
	(0.020)	(0.016)
Observations	4,267	4,959
(b) Moderate or High Consumption Amount		
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)		
$(LOC_{P33}, LOC_{P66}]$	0.017	-0.004
	(0.011)	(0.007)
$(LOC_{P66}, LOC_{max}]$	0.020*	-0.007
	(0.012)	(0.007)
Observations	4,267	4,959
All Controls	✓	✓

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.
Notes: Clustered Standard Errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

▸ Go back to Robustness

	Men			Women		
	All (1)	Ext. (2)	Int. (3)	All (4)	Ext. (5)	Int. (6)
How often do you drink alcohol?						
Every Day	0.11	0.12	0.11	0.03	0.03	0.04
4-6 days a week	0.12	0.10	0.13***	0.05	0.05	0.06*
2-3 days a week	0.25	0.23	0.27***	0.17	0.15	0.19***
2-4 days a month	0.24	0.23	0.25***	0.24	0.24	0.25
Once a month or less	0.17	0.18	0.16**	0.30	0.30	0.30
Never	0.12	0.15	0.09***	0.20	0.23	0.18***
Observations	4,267			4,961		
When you drink, how many drinks do you consume per day?						
1-2 drinks	0.59	0.60	0.58	0.79	0.79	0.79
3-4 drinks	0.29	0.29	0.30	0.17	0.17	0.17
5-6 drinks	0.08	0.08	0.08	0.03	0.03	0.03
7-9 drinks	0.02	0.02	0.03	0.01	0.01	0.01
10+ drinks	0.01	0.01	0.01	0.00	0.00	0.00
Observations	4,267			4,961		

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.
Notes: Individuals are grouped into internals (Int.) and externals (Ext.) based on whether their LOC is lower/equal or higher than the median. Significance stars refer to significance level of t-test for mean equivalence between externals and internals: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Go back to Robustness

	All	Men	Women
Baseline			
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)			
$(LOC_{P33}, LOC_{P66}]$	0.025^{***}	0.027^{***}	0.016
	(0.007)	(0.010)	(0.010)
$(LOC_{P66}, LOC_{max}]$	0.037^{***}	0.031^{***}	0.036^{***}
	(0.008)	(0.011)	(0.012)
Observations	36,035	17,377	18,658
(1) Simple LOC Index with Equal Weights[1]			
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)			
$(LOC_{P33}, LOC_{P66}]$	0.022^{***}	0.014	0.019^{*}
	(0.008)	(0.010)	(0.011)
$(LOC_{P66}, LOC_{max}]$	0.036^{***}	0.030^{***}	0.037^{***}
	(0.008)	(0.011)	(0.011)
Observations	36,035	17,377	18,658
(2) Averaged LOC Factor[2]			
Locus of Control Terciles (Ref.: $[LOC_{min}, LOC_{P33}]$)			
$(LOC_{P33}, LOC_{P66}]$	0.026^{***}	0.019	0.030^{**}
	(0.008)	(0.012)	(0.012)
$(LOC_{P66}, LOC_{max}]$	0.046^{***}	0.043^{***}	0.040^{***}
	(0.009)	(0.013)	(0.013)
Observations	36,035	17,377	18,658
All Controls	✓	✓	✓

Source: SOEP, waves 2006, 2008, 2010, version 33, doi:10.5684/soep.v33, own calculations.
Notes: Clustered Standard Errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$
[1] LOC factor for each year is calculated using a simple average of all 8 items used and thus assuming equal weights of all items. The Index is then imputed using the same rule as in the Baseline.
[2] LOC factor is calculated as usual for each year but is imputed into all years using the average over the LOC observations from 2005 and 2010.
[3] LOC factor is calculated as usual for 2005 and is imputed forward into all years.