Online-Appendix zu

„The Effect of Gratitude on Individuals' Effort –

A Field Experiment"

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Appendix

A1: Online questionnaire

Dear participant,

thank you for taking the time to participate in this study.
Within my master thesis at the seminar of personnel economics at the University of Cologne, I am currently conducting research on the present topic of incentives and employee motivation within agile working environments and new work structures.
This survey should only take 6-8 minutes to complete. Be assured that all answers you provide will be kept in the strictest confidentiality.

Please feel free to contact me if you have any questions or concerns.
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- New Screen -

1. Are you currently employed (Full-time, Part-time, Intern, Working student)?
   - Yes
   - No (If no, please refer in the following to your previous employer)
   - I have not been employed, so far.

- New Screen -

2. Does your employer offer flexible working arrangements (i.e. home-office)?
   - Yes
   - No
   - My occupation does not allow home-office arrangements (i.e. retail sale, production plants)

- New Screen -

2.1 How often (in % of your total working hours) do you work from home/some other place than the office?
   - 80 - 100%
   - 60 - 80 %
   - 40 - 60%
   - 20 - 40%
   - Less than 20%

- New Screen -

2.2 Would you preferably make use of it, if it would be offered?
   - Yes
   - No

- New Screen -

3. How often do you communicate with your supervisor in person?
   - Several times per day
   - Once per day
   - 2 - 3 times per week
   - Once per week
   - Less than once per week

4. How often do you communicate with your supervisor via email/phone?
   - Several times per day
   - Once per day
   - 2 - 3 times per week

- Once per week
- Less than once per week

- New Screen -

5. To support my research project, I'd ask you to write down all keywords that come to your mind when you think of the term "work-life-balance" (i.e. examples, synonyms, consequences or related terms)

6. In how many surveys/questionnaires have you voluntarily participated in the past 12 weeks?
- 0
- 1 - 3
- 4 - 6
- 7 - 10
- > 10
- I haven't been asked to participate in a survey within the past 12 weeks.

- New Screen -

7. Please indicate how much you agree with the following statements.

7.1) I go out of my way to help somebody who has been kind to me before.

Strongly disagree   **Strongly agree**

O   O   O   O   O   O   O

7.2) I am ready to undergo personal costs to help somebody who helped me before.

Strongly disagree   **Strongly agree**

O   O   O   O   O   O   O

7.3) When someone does me a favor, I am ready to return it.

Strongly disagree   **Strongly agree**

O   O   O   O   O   O   O

- New Screen -

8. What is your current employment status?
- Employed full-time (Permanent position)
- Employed part-time (Permanent position)
- Intern (Temporary position)
- Working student/Student assistant (Temporary position)
- Other

9. What is your gender?
- Female
- Male
- Other
- Prefer not to disclose

10. What is your age?
- < 18 years
- 18 - 24 years
- 25 - 34 years
- 35 - 44 years
- 45 - 54 years
- Over 55 years

- New Screen -

11. What is your highest educational achievement?
- Less than a high school diploma
- High school degree or equivalent
- Vocational training
- Bachelor's degree
- Master's degree
- Doctorate

12. Please specify your main are of study
- Economics
- Psychology
- Business
- Law
- Education
- Sociology/Social Work
- Mathematics/Statistics/Computer Science
- Engineering/Technology
- Agriculture/Veterinary
- Medicine/Health
- Education
- Humanities/Arts
- Other

13. Please specify your ethnicity
- White
- Hispanic or Latino
- Black or African American
- Native American or American Indian
- Asian/Pacific Islander
- Other

14. Which type of device did you use while participating in this survey?
- Smartphone
- Laptop
- Tablet
- Other

- New Screen -

End of survey – Your responses have been recorded!

Treatment Intervention

- New Screen -

1. To support my research project, I'd ask you to write down all keywords that come to your mind when you think of the term "employee motivation" (i.e. examples, synonyms, consequences or related terms)

_____

_____

- New Screen -

2. Do you feel appreciated by your supervisor? (If you are not employed at the moment, please refer to your former employer.

- Yes
- No
- Prefer not to disclose

- New Screen -

3. On how much salary would you be willing to sacrifice in exchange with higher appreciation (i.e. acknowledging your work, expressing thankfulness) communicated by your supervisor?

- 0%
- 1 - 20%
- 20 - 40%
- 40 - 60%
- 60 - 80%
- > 80%

- New Screen -

4. Please indicate how much you agree with the following statements.

4.1) The experimenter expressed gratitude and appreciation for my invested time and effort to fill out the first part of the survey.

Strongly disagree   **Strongly agree**

O   O   O   O   O   O   O

4.2) I felt valued as a person by the experimenter.

Strongly disagree   **Strongly agree**

O   O   O   O   O   O   O

4.3) I felt appreciated by the experimenter.

Strongly disagree   **Strongly agree**

O   O   O   O   O   O   O

4.4) I believe I was able to make a positive difference to the experimenter's research project.

Strongly disagree   **Strongly agree**

O   O   O   O   O   O   O

- New Screen -

Thank you for completing this questionnaire!

I would like to thank you very much for your participation. Please feel free to contact me if you have any questions or concerns.

A2: Visual representation of the treatment interventions

Baseline:

End of survey - Your responses have been recorded!

Besides the prior study, I have a few more, less essential questions to validate the obtained results. Click "next" and you will be automatically redirected to the next questionnaire. Alternatively, you can end the study by closing the web browser.

O. Wendenburg

GratitudeNote:

End of survey - Your responses have been recorded!

Thank you very much for participating in my survey. Your results will be of great use for my work project and are highly appreciated!

Besides the prior study, I have a few more, less essential questions to validate the obtained results. Click "next" and you will be automatically redirected to the next questionnaire. Alternatively, you can end the study by closing the web browser.

O. Wendenburg

GratitudeVideo:

**End of survey - Your responses have been recorded!**

Besides the prior study, I have a few more, less essential questions to validate the obtained results. Click "next" and you will be automatically redirected to the next questionnaire. Alternatively, you can end the study by closing the web browser.

A3: Descriptive characteristics of all treatments

	Control	GratitudeNote	GratitudeVideo	GratitudeAll
Continue after intervention	0.71	0.86	0.74	0.81
	(0.46)	(0.35)	(0.44)	(0.40)
Effort task 1 (in number of words)	8.23	8.28	7.40	7.81
	(6.53)	(7.11)	(5.42)	(6.27)
Effort task 2 (in number of words)	7.90	10.91	8.65	9.80
	(7.89)	(11.38)	(7.17)	(9.57)
Total time spent (in minutes)	5.18	5.38	5.69	5.55
	(2.20)	(2.10)	(2.41)	(2.27)
Total number of participants	69	65	73	207

Note: The table display means of the relevant outcome measures with the corresponding standard deviations in parentheses.

## A4: Overview of individuals click rate by gender
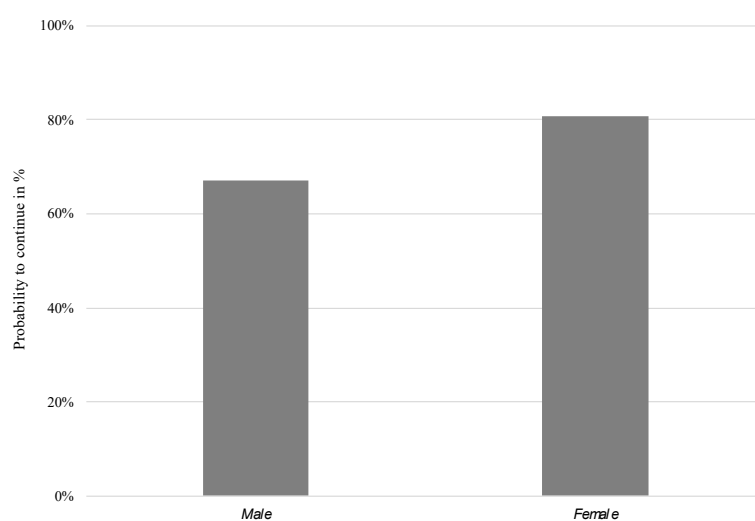
Note: The figure displays subjects' probability (in %) to continue to the second questionnaire.

A5: Effort proxy 1 – The impact of positive reciprocity (GratitudeAll)

	(1)	(2)	(3)	(4)
GratitudeAll	0.081	0.077	0.080	0.069
	(0.062)	(0.062)	(0.067)	(0.067)
Female	0.130**	0.125*	0.189***	0.182***
	(0.068)	(0.064)	(0.070)	(0.070)
Positive reciprocity	0.049	0.142*	0.082*	0.215**
	(0.038)	(0.081)	(0.044)	(0.090)
GratitudeAll x positive reciprocity		-0.057		-0.051
		(0.077)		(0.085)
Female x positive reciprocity		-0.095		-0.155*
		(0.080)		(0.093)
Constant	0.622***	0.632***	0.494***	0.507***
	(0.068)	(0.068)	(0.110)	(0.110)
Controls	No	No	Yes	Yes
Observations	207	207	185	185
Adjusted R²	0.025	0.024	0.052	0.058

*Note: The table displays OLS estimates with standard errors reported in parentheses. Controls include several dummies, namely for being between 25-34 years old, for using a smartphone to participate, for economics and business students, for individuals' intrinsic motivation and lastly for being fulltime employed. $p < 0.1$ *, $p < 0.05$ **, $p < 0.01$ ***.*

A6: Average effort in working period 2 by gender
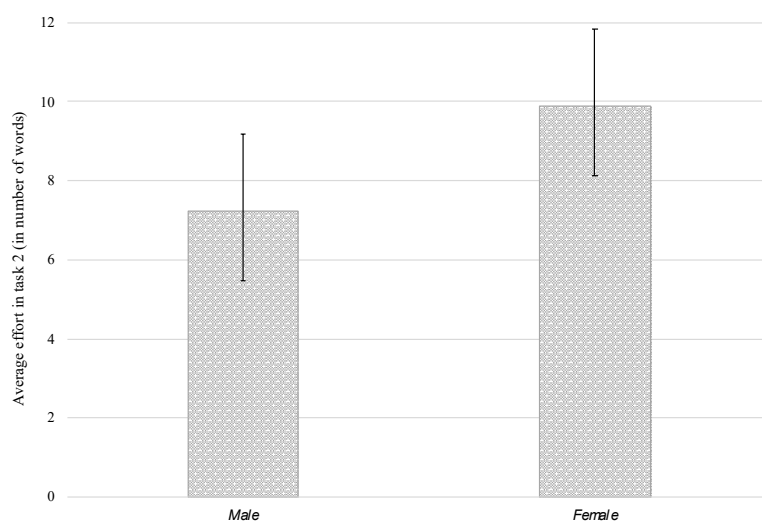
Note: The figure displays the mean quantity of words in task 2 and 95% confidence bands.

A7: Effort proxy 2 – Quantity of words

	(1) ln (Effort)	(2) ln (Effort)	(3) ln (Effort)	(4) ln (Effort)	(5) ln (Effort)	(6) ln (Effort)	(7) ln (Effort)
GratitudeNote	0.427***	0.429**	0.365	0.491**	0.506**	0.706**	0.509*
	(0.170)	(0.171)	(0.264)	(0.197)	(0.197)	(0.349)	(0.266)
GratitudeVideo	0.211	0.234	-0.105	0.317	0.351*	0.247	-0.001
	(0.178)	(0.174)	(0.302)	(0.203)	(0.198)	(0.398)	(0.301)
Female		0.257*	0.050		0.303*	0.342	0.161
		(0.144)	(0.258)		(0.160)	(0.343)	(0.260)
GratitudeNote x Female			0.080			-0.255	-0.059
			(0.336)			(0.401)	(0.328)
GratitudeVideo x Female			0.467			0.152	0.391
			(0.367)			(0.462)	(0.367)
Constant	1.644***	1.445***	1.605***	1.304***	1.026***	0.994**	1.280***
	(0.136)	(0.161)	(0.195)	(0.251)	(0.284)	(0.403)	(0.288)
Controls	No	No	No	Yes	Yes	Yes	Yes
Observations	159	159	159	140	140	140	159
Adjusted R²	0.028	0.039	0.038	0.052	0.066	0.060	0.059

*Note: The table displays OLS estimates with robust standard errors reported in parentheses. The dependent variable is the quantity of words in working period 2 which is presented in log values. Controls include several dummies, namely for being between 25-34 years old, for using a smartphone to participate, for economics and business students, for individuals' intrinsic motivation and lastly for being fulltime employed. Model 7 includes all controls besides intrinsic motivation. $p < 0.1$ *, $p < 0.05$ **, $p < 0.01$ ***.*

A8: Effort proxy 2 – Quantity of words (GratitudeAll)

	(1) ln (Effort)	(2) ln (Effort)	(3) ln (Effort)	(4) ln (Effort)	(5) ln (Effort)	(6) ln (Effort)	(7) ln (Effort)
GratitudeAll	0.321**	0.334**	0.099	0.409**	0.434**	0.466	0.217
	(0.156)	(0.155)	(0.249)	(0.182)	(0.179)	(0.338)	(0.253)
Female		0.271*	0.050		0.312*	0.343	0.159
		(0.148)	(0.256)		(0.164)	(0.340)	(0.259)
GratitudeAll x Female			0.308			-0.039	0.203
			(0.312)			(0.389)	(0.312)
Constant	1.644***	1.433***	1.605***	1.303***	1.016***	0.988**	1.269***
	(0.136)	(0.163)	(0.194)	(0.250)	(0.285)	(0.399)	(0.286)
Controls	No	No	No	Yes	Yes	Yes	Yes
Observations	159	159	159	140	140	140	159
Adjusted R²	0.023	0.036	0.035	0.052	0.068	0.061	0.054

*Note: The table displays OLS estimates with robust standard errors reported in parentheses. The dependent variable is the quantity of words in working period 2 and presented in log values. Controls include several dummies, namely for being between 25-34 years old, for using a smartphone to participate, for economics and business students, for individuals' intrinsic motivation and lastly for being fulltime employed. Model 7 includes all controls besides intrinsic motivation. $p < 0.1$ *, $p < 0.05$ **, $p < 0.01$ ***.*

A9: Effort proxy 2 – The impact of positive reciprocity (GratitudeAll)

	(1)	(2)	(3)	(4)
GratitudeAll	1.990	1.965	2.861	2.801
	(1.445)	(1.461)	(1.928)	(1.912)
Female	2.743**	2.723**	2.887*	2.775*
	(1.336)	(1.345)	(1.515)	(1.426)
Positive reciprocity	0.695	0.379	1.112	0.128
	(0.638)	(1.400)	(0.986)	(2.231)
GratitudeAll x positive reciprocity		0.094		0.650
		(1.303)		(1.792)
Female x positive reciprocity		0.383		0.856
		(1.322)		(2.208)
Constant	5.770***	5.797***	3.947	4.183
	(1.315)	(1.304)	(2.733)	(2.745)
Controls	No	No	Yes	Yes
Observations	159	159	140	140
Adjusted R²	0.012	-0.001	0.026	0.012

*Note: The table displays OLS coefficients with robust standard errors in parentheses. The dependent variable is the quantity of words in effort task 2. Independent variables are the specific treatments, a dummy for gender, and a measure for positive reciprocity. Positive reciprocity is the centered mean response of individuals to the reciprocity proxy. Controls include several dummies, namely for being between 25-34 years old, for using a smartphone to participate, for economics and business students, for individuals' intrinsic motivation and lastly for being fulltime employed. $p < 0.1$ *, $p < 0.05$ **, $p < 0.01$ ***.*

A10: Robustness check for both effort proxies

	(1)	(2)	(3)	(4)	(5)	(6)
GratitudeNote	0.136*	0.129*	0.301**	3.386*	3.611*	5.026
	(0.075)	(0.074)	(0.146)	(1.840)	(1.837)	(4.245)
GratitudeVideo	-0.016	-0.009	0.115	0.903	1.181	3.848
	(0.075)	(0.074)	(0.135)	(1.893)	(1.898)	(4.185)
Female		0.161**	0.299**		2.409	4.358
		(0.067)	(0.120)		(1.772)	(3.719)
GratitudeNote x Female			-0.232			-1.658
			(0.168)			(4.686)
GratitudeVideo x Female			-0.172			-3.404
			(0.160)			(4.708)
Constant	0.302**	0.201*	0.109	-2.460	-4.578	-6.460
	(0.115)	(0.121)	(0.000)	(3.068)	(3.433)	(4.609)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	185	185	185	185	185	185
Adjusted R²	0.106	0.130	0.131	0.153	0.159	0.149

*Note: Model 1-3 display OLS estimates with the continue dummy as the dependent variable. Model 4-6 display OLS estimates with the quantity of words in effort task 2 as the dependent variable. Standard errors are displayed in parentheses. All models include an additional variable, namely the duration of total time individuals spent on the experiment. Controls include several dummies, namely for being between 25-34 years old, for using a smartphone to participate, for economics and business students, for individuals' intrinsic motivation and lastly for being fulltime employed. $p < 0.1$ *, $p < 0.05$ **, $p < 0.01$ ***.*

A11: Descriptive characteristics of the manipulation check

	Control	GratitudeNote	GratitudeVideo	GratitudeAll
Manipulation check	4.44	5.67	5.89	5.78
	(1.46)	(2.28)	(1.09)	(1.79)
Total number of participants	48	55	54	109

Note: The table display means of the measure for the manipulation check. The corresponding standard deviations are reported in parentheses.