

## Online appendices

### Appendix A. Work-related issues over the past year (percentages)

Work-related issue	%
I was dissatisfied with the amount of my wages	30.86
I did not receive my payment, did not receive my payment on time, was paid less than agreed upon	4.94
I was dissatisfied with the fringe benefits (e.g. number of days off)	8.23
I was dissatisfied with not (yet) receiving a permanent contract	5.86
I was dissatisfied with the number of working hours	10.29
I had too much work pressure/stress	52.17
I had insufficient rests/breaks during my working hours	13.93
I did not have the means to do my job safely	11.14
I was dissatisfied with (changes in) my duties and work tasks	21.91
I was dissatisfied with (the consequences of) a change within the organization	17.13
I was dissatisfied with my opportunities for growth and development within the organization	18.46
I was discriminated against/treated worse than others at work	2.72
There was a case of sexual harassment at work	0.85
I was bullied/harassed at work	4.05
My supervisor/employer was being difficult because I was sick or pregnant	3.96
My supervisor/employer was not flexible when I had private issues	3.58
Other, namely...	5.70
None	

Notes:  $N = 3,159$ . Respondents who selected “None” were excluded from the data set.

Source: Own calculations based on data from the Work and Politics Panel Survey 2020.

## Appendix B. Supervisor responses to worker voice (percentages)

Supervisor response	Type of response	%
My supervisor helped me to fix the issue	Support	37.52
I received a compliment from my supervisor	Support	13.31
My supervisor provided a good explanation for the situation	Passive	26.00
My supervisor ignored the issue	Suppression	12.30
I received criticism from my supervisor	Suppression	5.63
My supervisor demanded that I stop talking about the issue	Suppression	2.93
My supervisor indicated that he/she could not change much about the issue	Passive	19.17
My supervisor brushed me off by saying that nothing could be done about the issue	Suppression	13.34
My supervisor sabotaged my career (e.g. by denying promotion or training/education opportunities)	Suppression	2.24
The issue led to the termination of my contract/my contract was not renewed	Suppression	1.58
My supervisor gave me a bad review during an appraisal	Suppression	1.77
I received an official warning (letter)/punishment	Suppression	0.54
My supervisor bullied, threatened or intimidated me	Suppression	1.23
My supervisor made my work unpleasant	Suppression	3.12
Other, namely...		4.55
None		8.60

Note:  $N = 2,593$ : workers who raised an issue with their supervisor or whose supervisor was aware that the issue had been raised elsewhere.

Source: Own calculations based on data from the Work and Politics Panel Survey 2020.

## Appendix C

Table C1. Descriptive statistics

	Min.	Max.	Mean/%	SD
Promotive voice				
PV1	1.00	5.00	3.63	1.00
PV2	1.00	5.00	3.56	1.01
PV3	1.00	5.00	3.51	1.01
Affective organizational commitment (AOC)				
AOC1	1.00	5.00	3.59	1.00
AOC2	1.00	5.00	3.29	1.06
AOC3	1.00	5.00	3.23	1.08
AOC4	1.00	5.00	3.34	1.00
Perceived supervisor responsiveness (PSR)				
PSR1	1.00	5.00	3.22	1.06
PSR2	1.00	5.00	3.42	1.02
PSR3	1.00	5.00	3.52	1.06
Worker voice				
<i>No worker voice</i>	0.00	1.00	9.43%	
Supervisor support of worker voice	0.00	1.00	35.64%	
Supervisor suppression of worker voice	0.00	1.00	21.87%	
Voice, no support or suppression	0.00	1.00	33.05%	
Contract type				
<i>Permanent contract</i>	0.00	1.00	81.23%	
Temporary contract with prospect	0.00	1.00	11.36%	
Temporary contract without prospect	0.00	1.00	4.91%	
Solo self-employed	0.00	1.00	2.50%	
Education				
<i>Low-level education</i>	0.00	1.00	6.36%	
Middle-level education	0.00	1.00	42.36%	
High-level education	0.00	1.00	51.28%	
Tenure	0.00	49.00	9.91	10.44
Supervisor position	0.00	1.00	27.10%	
Gender (0 = Female)	0.00	1.00	48.27%	
Age (0 = 15 years)	1.00	63.00	27.82	12.06

Notes:  $N = 3,159$ . Variables in italics were used as reference categories within their categorical variables. SD = standard deviation.

Source: Own calculations based on data from the Work and Politics Panel Survey 2020.

Table C2. Correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12
1. PV1	–											
2. PV2	.80***	–										
3. PV3	.73***	.82***	–									
4. AOC1	.23***	.24***	.24***	–								
5. AOC2	.24***	.26***	.27***	.67***	–							
6. AOC3	.21***	.24***	.25***	.68***	.78***	–						
7. AOC4	.23***	.25***	.26***	.68***	.78***	.79***	–					
8. PSR1	.09***	.09***	.09***	.40***	.30***	.32***	.33***	–				
9. PSR2	.14***	.14***	.14***	.42***	.33***	.35***	.34***	.63***	–			
10. PSR3	.15***	.15***	.15***	.41***	.32***	.33***	.35***	.70***	.61***	–		
11. No worker voice	–	–	–	–.05**	–.05*	–.06**	–.06**	–.02	–.04*	–.04*	–	
12. Supervisor support of worker voice	.16***	.17***	.15***									
13. Supervisor suppression of worker voice	.12***	.11***	.10***	.21***	.16***	.20***	.19***	.31***	.29***	.29***	–	–
14. Voice, no support or suppression												
15. Permanent contract	.06***	.07***	.07***	–	–	–	–	–	–	–	–	–
16. Temporary contract with prospect				.21***	.14***	.17***	.15***	.34***	.34***	.32***	.17***	.39***
17. Temporary contract without prospect	–	–	–	.00	–.00	–.02	–.03	.00	.03	.00	–	–
18. Solo self-employed	.07***	.07***	.07***									
19. Low-level education	.07***	.08***	.06**	.08***	.09***	.09***	.10***	.02	.03	.05**	–	.11***
20. Middle-level education	–.03	–.04*	–.03	–.02	–.04*	–.03	–.03	.01	.03	.00	.03	–
21. High-level education	–	–	–	–	–	–	–	–.06**	–.06**	–	.05**	–.05**
22. Tenure	.09***	.10***	.09***	.10***	.09***	.11***	.12***	–	–	.09***		
23. Supervisor position	.02	.02	.04*	–.04*	–.02	–.01	–.02	.01	–.04*	–.01	.06***	–.03
24. Gender (0 = female)	–	–	–	–	–	–	–	–.04*	–.04*	–	.03	–.02
25. Age (0 = 15 years)	.11***	.13***	.10***	.07***	.06***	.07***	.07***	–	–	.08***		
	–	–	–	–.06**	–	–.02	–.04	–	–	–	.00	–.04*
	.13***	.15***	.13***		.07***			.07***	.07***	.11***		
	.18***	.21***	.18***	.09***	.10***	.06**	.07***	.09***	.09***	.15***	–.02	.05**
	.00	–.00	–.01	.04*	.12***	.07***	.10***	–.03	–.05**	–.02	–.02	.01
	.20***	.21***	.24***	.09***	.10***	.10***	.10***	.02	.03	.07***	–.04*	.06**
	.03	.07***	.09***	–.01	–.03	–.00	–.00	–.03	–.04*	–.03	.01	.02
	.03	.01	.01	.01	.02	–.01	.03	–.03	–	–	–.05**	–.05**
									.08***	.06***		

\*, \*\* and \*\*\* indicate statistical significance at the 5, 1 and 0.1 per cent levels, respectively.

Source: Own calculations based on data from the Work and Politics Panel Survey 2020.

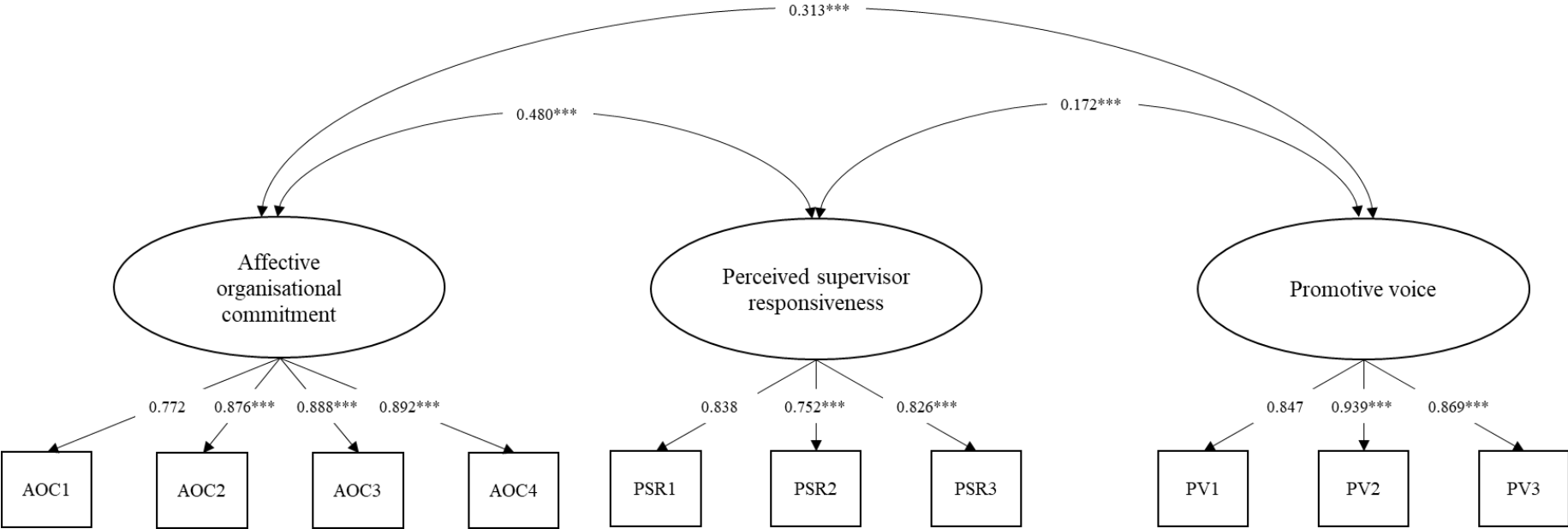
## Correlation matrix (cont.)

	18	19	20	21	22	23	24
1. PV1							
2. PV2							
3. PV3							
4. AOC1							
5. AOC2							
6. AOC3							
7. AOC4							
8. PSR1							
9. PSR2							
10. PSR3							
11. No worker voice							
12. Supervisor support of worker voice							
13. Supervisor suppression of worker voice							
14. Voice, no support or suppression							
15. Permanent contract							
16. Temporary contract with prospect							
17. Temporary contract without prospect							
18. Solo self-employed	–						
19. Low-level education	–.01	–					
20. Middle-level education	–.06**	–	–				
		.22***					
21. High-level education	.06**	–	–	–			
		.27***	.88***				
22. Tenure	–	.07***	.07***	–	–		
	.08***			.10***			
23. Supervisor position	.01	–.05*	–	.09***	.02	–	
			.07***				
24. Gender (0 = female)	.04*	.05**	.02	–.05*	.09***	.17***	–
25. Age (0 = 15 years)	.03	.07***	.06**	–	.54***	–.00	.11***
				.09***			

\*, \*\* and \*\*\* indicate statistical significance at the 5, 1 and 0.1 per cent levels, respectively.

Source: Own calculations based on data from the Work and Politics Panel Survey 2020.

Appendix D. Path diagram of the measurement model



\*\*\* indicates statistical significance at the 0.1 per cent level.

Source: Own calculations based on data from the Work and Politics Panel Survey 2020.

Appendix E. Estimates for the structural regression model

	Estimate	Standardized estimate
Supervisor support of worker voice → PSR	0.52 (0.06)	0.28***
Supervisor suppression of worker voice → PSR	-0.60 (0.06)	-0.28***
PSR → promotive voice	0.05 (0.02)	0.05*
Supervisor support of worker voice → AOC	0.33 (0.05)	0.20***
Supervisor suppression of worker voice → AOC	-0.15 (0.05)	-0.08**
AOC → promotive voice	0.29 (0.02)	0.26***
Voice, no support or suppression → PSR	0.12 (0.06)	0.07*
Voice, no support or suppression → AOC	0.10 (0.05)	0.06*
Supervisor support of worker voice → promotive voice	0.41 (0.05)	0.23***
Supervisor suppression of worker voice → promotive voice	0.60 (0.06)	0.29***
Voice, no support or suppression → promotive voice	0.32 (0.05)	0.18***
Age → PSR	-0.00 (0.00)	-0.02
Gender → PSR	-0.06 (0.03)	-0.04*
Middle-level education → PSR	0.11 (0.06)	0.06
High-level education → PSR	0.31 (0.06)	0.18***
Temporary contract with prospect → PSR	0.11 (0.05)	0.04*
Temporary contract without prospect → PSR	-0.28 (0.07)	-0.07***
Solo self-employed → PSR	-0.10 (0.10)	-0.02
Tenure → PSR	-0.00 (0.00)	-0.03
Supervisor position → PSR	0.07 (0.04)	0.03
Age → AOC	-0.00 (0.00)	-0.04
Gender → AOC	-0.05 (0.03)	-0.03
Middle-level education → AOC	0.17 (0.06)	0.11**
High-level education → AOC	0.27 (0.06)	0.18***
Temporary contract with prospect → AOC	0.03 (0.05)	0.01
Temporary contract without prospect → AOC	-0.33 (0.07)	-0.09***
Solo self-employed → AOC	-0.07 (0.09)	-0.01
Tenure → AOC	0.01 (0.00)	0.11***
Supervisor position → AOC	0.17 (0.03)	0.10***
Age → promotive voice	0.00 (0.00)	0.04
Gender → promotive voice	0.10 (0.03)	0.06**
Middle-level education → promotive voice	0.20 (0.06)	0.12**
High-level education → promotive voice	0.45 (0.06)	0.27***
Temporary contract with prospect → promotive voice	-0.08 (0.05)	-0.03

Estimates for the structural regression model (cont.)

	Estimate	Standardized Estimate
Temporary contract without prospect → promotive voice	-0.23 (0.07)	-0.06**
Solo self-employed → promotive voice	0.10 (0.09)	0.02
Tenure → promotive voice	-0.00 (0.00)	-0.06**
Supervisor position → promotive voice	0.32 (0.03)	0.17***
R <sup>2</sup>		
Promotive voice	0.22	
PSR	0.25	
AOC	0.10	

\*, \*\* and \*\*\* indicate statistical significance at the 5, 1 and 0.1 per cent levels, respectively.

Notes: PSR = perceived supervisor responsiveness; AOC = affective organizational commitment.  $N = 3,159$ .

Standard errors appear in parentheses.

Source: Own calculations based on data from the Work and Politics Panel Survey 2020.



## Appendix F

The items measuring prohibitive voice were based on items from Liang, Farh and Farh (2012). Respondents indicated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), the degree to which they agreed with these items.

Table F1. Items used to measure prohibitive voice

Item
I speak up about problems openly, even if other people within my organization have a different opinion
I voice my opinion on how we can improve efficiency within my organization, even if I embarrass others
I speak up about problems within my organization, even if it hampers my relationship with my colleagues

Table F2. Estimates for the indirect effects of the promotive and prohibitive structural regression model

	Estimate	Standardized estimate
Supervisor support → PSR → promotive voice	0.03 (0.01)	0.01*
Supervisor support → AOC → promotive voice	0.09 (0.02)	0.05***
Supervisor support → PSR → prohibitive voice	0.00 (0.01)	0.00
Supervisor support → AOC → prohibitive voice	0.07 (0.01)	0.04***
Supervisor suppression → PSR → promotive voice	-0.03 (0.01)	-0.01*
Supervisor suppression → AOC → promotive voice	-0.04 (0.02)	-0.02**
Supervisor suppression → PSR → prohibitive voice	-0.00 (0.02)	-0.00
Supervisor suppression → AOC → prohibitive voice	-0.03 (0.01)	-0.02**

\*, \*\* and \*\*\* indicate statistical significance at the 5, 1 and 0.1 per cent levels, respectively.

Notes: PSR = perceived supervisor responsiveness; AOC = affective organizational commitment.  $N = 3,159$ . Standard errors appear in parentheses.

Source: Own calculations based on data from the Work and Politics Panel Survey 2020.

Table F3. Estimates for the promotive and prohibitive structural regression model

	Estimate	Standardized estimate
Supervisor support of worker voice → PSR	0.52 (0.06)	0.28***
Supervisor suppression of worker voice → PSR	-0.60 (0.06)	-0.28***
PSR → promotive voice	0.05 (0.02)	0.05*
PSR → prohibitive voice	0.00 (0.02)	0.00
Supervisor support of worker voice → AOC	0.33 (0.05)	0.20***
Supervisor suppression of worker voice → AOC	-0.15 (0.05)	-0.08**
AOC → promotive voice	0.29 (0.02)	0.26***
AOC → prohibitive voice	0.22 (0.02)	0.20***
Voice, no support or suppression → PSR	0.12 (0.06)	0.07*
Voice, no support or suppression → AOC	0.10 (0.05)	0.06*
Supervisor support of worker voice → promotive voice	0.41 (0.05)	0.23***
Supervisor suppression of worker voice → promotive voice	0.61 (0.06)	0.30***
Voice, no support or suppression → promotive voice	0.32 (0.05)	0.18***
Supervisor support of worker voice → prohibitive voice	0.43 (0.06)	0.24***
Supervisor suppression of worker voice → prohibitive voice	0.57 (0.06)	0.28***
Voice, no support or suppression → prohibitive voice	0.34 (0.06)	0.19***
Age → PSR	-0.00 (0.00)	-0.02
Gender → PSR	-0.06 (0.03)	-0.04*
Middle-level education → PSR	0.11 (0.06)	0.06
High-level education → PSR	0.31 (0.06)	0.18***
Temporary contract with prospect → PSR	0.11 (0.05)	0.04*
Temporary contract without prospect → PSR	-0.28 (0.07)	-0.07***
Solo self-employed → PSR	-0.10 (0.10)	-0.02
Tenure → PSR	-0.00 (0.00)	-0.03
Supervisor position → PSR	0.07 (0.04)	0.03
Age → AOC	-0.00 (0.00)	-0.04
Gender → AOC	-0.05 (0.03)	-0.03
Middle-level education → AOC	0.17 (0.06)	0.11**
High-level education → AOC	0.27 (0.06)	0.18***
Temporary contract with prospect → AOC	0.03 (0.05)	0.01
Temporary contract without prospect → AOC	-0.33 (0.07)	-0.09***
Solo self-employed → AOC	-0.07 (0.09)	-0.01
Tenure → AOC	0.01 (0.00)	0.11***
Supervisor position → AOC	0.17 (0.03)	0.10***

Estimates for the promotive and prohibitive structural regression model (cont.)

	Estimate	Standardized estimate
Age → promotive voice	0.00 (0.00)	0.04
Gender → promotive voice	0.10 (0.03)	0.06**
Middle-level education → promotive voice	0.19 (0.06)	0.11**
High-level education → promotive voice	0.45 (0.06)	0.26***
Temporary contract with prospect → promotive voice	-0.08 (0.05)	-0.03
Temporary contract without prospect → promotive voice	-0.23 (0.07)	-0.06**
Solo self-employed → promotive voice	0.11 (0.09)	0.02
Tenure → promotive voice	-0.01 (0.00)	-0.06**
Supervisor position → promotive voice	0.33 (0.03)	0.17***
Age → prohibitive voice	-0.00 (0.00)	-0.00
Gender → prohibitive voice	0.23 (0.03)	0.14***
Middle-level education → prohibitive voice	0.15 (0.06)	0.09*
High-level education → prohibitive voice	0.29 (0.06)	0.17***
Temporary contract with prospect → prohibitive voice	-0.14 (0.05)	-0.05**
Temporary contract without prospect → prohibitive voice	-0.35 (0.07)	-0.09***
Solo self-employed → prohibitive voice	0.03 (0.10)	0.01
Tenure → prohibitive voice	-0.00 (0.00)	-0.03
Supervisor position → prohibitive voice	0.35 (0.03)	0.19***
R <sup>2</sup>		
Promotive voice	0.22	
Prohibitive voice	0.18	
PSR	0.25	
AOC	0.10	

\*, \*\* and \*\*\* indicate statistical significance at the 5, 1 and 0.1 per cent levels, respectively.

Notes: PSR = perceived supervisor responsiveness; AOC = affective organizational commitment. *N* = 3,159. Standard errors appear in parentheses.

Source: Own calculations based on data from the Work and Politics Panel Survey 2020.