



## Deliverable D5.2

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# Research report: Effects of regulatory instruments and enforcement styles on citizen trust

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## Abbreviations, Participant short names

### Abbreviations

ANCOVA	Analysis of Covariance
ANOVA	Analysis of Variance
WP	Work Package

### Participant short names

UNIL	Université de Lausanne
UAntwerpen	Universiteit Antwerpen
IBEI	Institut Barcelona d'Estudis Internacionals, Fundacio Privada
HUJI	The Hebrew University of Jerusalem
Uni-Speyer	German University of Administrative Sciences
AU	Aarhus Universitet
UiO	Universitetet i Oslo
UU	Universiteit Utrecht
Kozminski	Akademia Leona Kozminskiego
SCIPROM	SCIPROM Sàrl



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## Summary

This report presents the preliminary analysis of the six experiments on citizens' trust conducted as part of the work package WP5. The experiments test the effects of regulatory enforcement style on citizens' trust in both regulators and regulatees in six countries: the Netherlands, Germany, Israel, Norway, Denmark, and Belgium, and in three domains: food safety, finance, and data protection. In this document we first outline the structure and rationale of the experiments. We then report on the main analysis testing the effects of three dimensions of regulatory enforcement: formalism, coerciveness, and accommodation on citizens' trust in regulators and regulatees in the three domains. Finally, we present a covariate analysis exploring the potential effects of a range of variables on the relationship between regulatory enforcement style and citizens' trust.

The findings show variations in the observed levels of trust: citizens' trust in both regulatees and regulators in the three regulated sectors is the highest in the Netherlands and Norway, while the lowest in Israel. Regulators are consistently seen as more trustworthy than regulatees; and trust in the data protection and food safety sector is generally somewhat higher than trust in the finance sector.

When it comes to the effects of the three dimensions of enforcement style on citizens' trust, we observe a rather mixed picture. We find very limited evidence that the degree of formalism displayed by the regulator affects citizens' trust in either the regulator or the regulatees. The evidence with regard to the positive effect of coerciveness on citizens' trust is stronger in the case of regulators, but less so with regard to the regulatees. The level of accommodation affects the levels of trust in regulators and regulatees in different ways in different contexts.

We find very limited evidence that enforcement in general increases trust in either regulators or regulatees. Curiously, we observe that the enforcement effects on trust are consistently stronger in the countries where the overall levels of trust are comparatively lower: Israel and Denmark. This suggests the presence of a ceiling effect.

Finally, the covariate analysis indicated a consistent and positive relationship between generalized trust, preferences about (stronger) regulation, and knowledge of the work of the regulator with the levels of trust citizens place both in the regulator and the regulatees in the three investigated sectors.

## 1. Introduction

In this introductory section we provide a summary of the most important elements of the survey experiments: the rationale, the design, and an overview of the collected data. This summary should facilitate the understanding of the analysis presented in the remainder of this report. Considerably more detailed account on the theoretical basis of the experiments, as well as their development and fielding are available in deliverable D5.1 (available upon request).

### 1.1 Rationale of the experiments

The goal of these survey experiments is to determine the effect of regulatory enforcement style on citizens' trust in the regulator as well as in the regulatees. Specifically, the focus is placed on three dimensions of enforcement, which have emerged from the previous literature on regulation (Carter, 2017; De Boer, 2019; Lo et al., 2009; May & Winter, 1999; 2000; May & Wood, 2003), namely: formalism, coerciveness, and accommodation.

The dimension of formalism aims to capture the extent to which the regulator follows a strict or a lenient application of the rules. Coerciveness refers to the employment of sanctions by regulators in the face of identified violations: whether the regulators employ a more punitive or educational approach. Finally, the dimension of accommodation captures the degree to which the perspective of the regulatee who committed the violation is taken into account in the enforcement decision of the regulator.

On the basis of theoretical accounts and previous empirical evidence (elaborated in D5.1), we postulate the hypotheses concerning the levels of trust in the regulator and the regulatees displayed in Table 1. All hypotheses have been preregistered (<https://osf.io/z38ug>).

**Table 1. Hypotheses regarding the effect of enforcement on trust in regulator and regulatees**

	Regulator	Regulatees
Overall effect	<i>Enforcement (in general) has a positive effect on trust in the regulatory agency, compared to a control group receiving generic information about the regulatory agency.</i>	<i>Enforcement (in general) has a positive effect on trust in regulatees, compared to a control group receiving generic information about the regulatory agency</i>
Formalism	<i>High formalism (strictness) has a positive effect on trust in the regulatory agency, compared to low formalism.</i>	<i>High formalism (strictness) has a positive effect on trust in regulatees, compared to low formalism.</i>
Coerciveness	<i>High coerciveness (punitiveness) has a positive effect on trust in the regulatory agency, compared to low coerciveness.</i>	<i>High coerciveness (punitiveness) has a positive effect on trust in regulatees, compared to low coerciveness.</i>
Accommodation	<i>High accommodation has a negative effect on trust in the regulatory agency, compared to low accommodation.</i>	<i>High accommodation has a negative effect on trust in regulatees, compared to low accommodation.</i>

### 1.2 Experimental design

The survey experiments present three vignettes depicting situations requiring regulatory response in three domains: food safety, finance, and data protection. The regulatory response to the situation follows the vignette, in which each of the three dimensions of regulatory enforcement is randomized. Since each of the enforcement dimensions can take two values (Table 2), we obtain in total of eight treatment groups, to which we add one control group which receives a vignette describing the regulatory situation, but does not receive an account of the regulatory enforcement.



Table 2. Experimental manipulations of the three dimensions of enforcement

Dimension of enforcement	Low	High
Formalism	<i>The [regulatory agency] adopts a <b>flexible</b> interpretation of the rules for this kind of violation.</i>	<i>The [regulatory agency] adopts a <b>strict</b> interpretation of the rules for this kind of violation.</i>
Coerciveness	<i>The [regulatory agency] decided to issue a <b>formal warning</b> to the [regulatee]. If the issue is not fixed soon, the [regulatory agency] can give a fine.</i>	<i>The [regulatory agency] decided to issue a <b>high fine</b> to the [regulatee].</i>
Accommodation	<i>The [regulatory agency] inspectors investigated the issue and reached their decision. They <b>did not give the [regulatee] an opportunity to react and explain what happened</b> before concluding their assessment.</i>	<i>The [regulatory agency] inspectors investigated the issue and reached their decision. They <b>gave the [regulatee] an opportunity to react and explain what happened</b> before concluding their assessment.</i>

The three vignettes were displayed to each participant in a random order. After the participants read the situations and the regulatory response to them, they were asked to report their trust in the regulator and the regulatees in the sector, using a three-item trust measurement, capturing the degree to which the participants perceive regulators and regulatees to be competent, benevolent, and to have integrity. In the remainder of the survey, the participants were asked questions aimed to test the perception of the experimental manipulations and their attentiveness, their trust in people in general, their views on the role of the government in the economy, and their knowledge of the work of the regulators in the three domains. The latter three variables are used as covariates in the analysis that follows. Finally, at the start of the survey, the participants were asked to report a set of background variables, such as their gender, age group, and highest educational attainment.

### 1.3 Overview of the collected data

The experiments were fielded simultaneously in Belgium, the Netherlands, Germany, Denmark, Norway, and Israel between June 21, 2021 and July 6, 2021 with the assistance of the company Kantar. A representative sample of the adult population, in terms of age group, gender, and highest educational attainment, was drawn from Kantar's (and their collaborators) respondent panels. The collected data was subsequently cleaned and transformed to facilitate its analysis. Ultimately, we collected 5765 participant responses (Table 3), and the complete dataset contains 42 variables.

Table 3. Sample size per country

	Belgium	Germany	Denmark	Israel	Norway	Netherlands	Total
N	939	947	967	978	978	956	5765



## 2. Analysing the experiments

This section reports the experimental analysis. First, we explain the construction of the dependent variable from the three indicators of competence, benevolence and integrity (2.1). Then we report the results from the manipulation checks (2.2). The two following sub-sections report the results from the main experimental analysis, namely the effect of the three dimensions of enforcement on citizens' trust in the regulator (2.3) and regulatees (2.4) in the three sectors of interest: food safety, finance, and data protection. The following sub-section reports on the analysis from the subsample of participants who passed the attention check (2.5). Finally, the last sub-section explores the effects of a number of covariates (2.6).

### 2.1 Constructing the dependent variables

The dependent variables in the experiment represent the trust citizens place in the regulatory agencies and regulatees in the three examined sectors: food safety, finance, and data protection. Trust was measured using a shortened validated scale (Grimmelikhuijsen & Knies, 2017), consisting of three items capturing the dimensions of competence, benevolence, and integrity. The mean values and standard deviations of each of the three dimensions of trust measures are reported in Table 4.

**Table 4. Mean values and standard deviations of the three dimensions of trust.** *Note: Table displays means and standard deviations in brackets. The scale ranges from 1 – very low to 7 – very high.*

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Trust in regulator food safety sector</b>						
competence	4.88 (1.42)	4.60 (1.52)	4.74 (1.48)	4.27 (1.60)	4.92 (1.47)	5.35 (1.26)
benevolence	4.92 (1.50)	4.70 (1.54)	4.80 (1.53)	4.17 (1.66)	5.05 (1.45)	5.33 (1.36)
integrity	4.84 (1.43)	4.72 (1.44)	4.82 (1.40)	4.27 (1.58)	5.09 (1.42)	5.36 (1.24)
<b>Trust in regulatees food safety sector</b>						
competence	4.59 (1.30)	4.13 (1.58)	3.87 (1.57)	3.82 (1.50)	4.83 (1.26)	5.00 (1.27)
benevolence	4.34 (1.42)	3.94 (1.63)	3.83 (1.54)	3.51 (1.50)	4.63 (1.32)	4.68 (1.36)
integrity	4.45 (1.36)	3.99 (1.57)	3.93 (1.47)	3.79 (1.48)	4.70 (1.31)	4.83 (1.30)
<b>Trust in regulator finance sector</b>						
competence	4.77 (1.36)	4.40 (1.56)	4.54 (1.52)	4.51 (1.51)	5.16 (1.29)	5.27 (1.29)
benevolence	4.52 (1.47)	4.37 (1.58)	4.55 (1.52)	3.99 (1.62)	5.03 (1.37)	5.09 (1.38)



integrity	4.72 (1.42)	4.47 (1.52)	4.64 (1.47)	4.40 (1.56)	5.17 (1.31)	5.20 (1.33)
Trust in regulatees finance sector						
competence	4.35 (1.46)	4.02 (1.58)	3.58 (1.56)	3.99 (1.55)	4.66 (1.36)	4.67 (1.41)
benevolence	3.79 (1.61)	3.72 (1.61)	3.46 (1.56)	3.32 (1.55)	4.21 (1.45)	4.36 (1.52)
integrity	4.01 (1.55)	3.84 (1.58)	3.54 (1.57)	3.66 (1.52)	4.44 (1.43)	4.50 (1.50)
Trust in regulator data protection sector						
competence	4.87 (1.36)	4.80 (1.44)	4.70 (1.44)	4.61 (1.48)	5.34 (1.29)	5.32 (1.22)
benevolence	4.82 (1.38)	4.78 (1.46)	4.74 (1.47)	4.54 (1.58)	5.34 (1.32)	5.32 (1.33)
integrity	4.88 (1.31)	4.84 (1.38)	4.77 (1.39)	4.64 (1.47)	5.41 (1.25)	5.37 (1.21)
Trust in regulatees data protection sector						
competence	4.92 (1.28)	4.46 (1.51)	4.27 (1.54)	4.42 (1.54)	4.93 (1.34)	5.22 (1.26)
benevolence	4.72 (1.33)	4.38 (1.50)	4.32 (1.48)	4.09 (1.52)	4.96 (1.30)	5.10 (1.29)
integrity	4.84 (1.31)	4.53 (1.42)	4.51 (1.41)	4.37 (1.45)	5.01 (1.30)	5.24 (1.27)

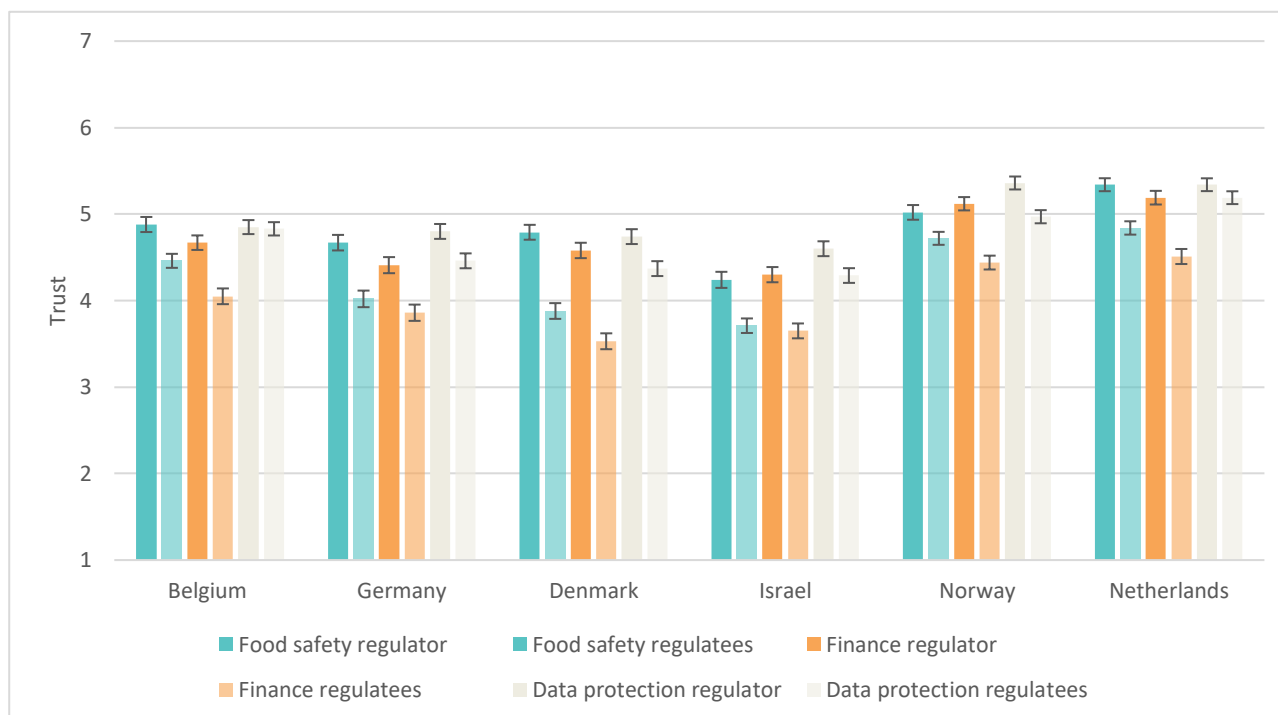
To conduct the main analysis, it was necessary to construct the trust scale as a composite variable, integrating the three dimensions of trust. To construct the trust scale, we averaged the values of the three items. The measures of internal consistency for the trust scale expressed in Cronbach's alphas (Bland & Altman, 1997) for all composite trust variables are presented in Table 5. The mean values of the newly constructed trust variables are provided in Figure 1.

**Table 5. Cronbach's alphas of all trust variables**

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Trust in regulator food safety sector	0.92	0.93	0.92	0.91	0.92	0.91
Trust in regulatees food safety sector	0.92	0.94	0.93	0.88	0.91	0.91



Trust in regulator finance sector	0.92	0.93	0.94	0.88	0.91	0.93
Trust in regulatees finance sector	0.91	0.93	0.93	0.87	0.89	0.92
Trust in regulator data protection sector	0.93	0.93	0.94	0.90	0.93	0.92
Trust in regulatees data protection sector	0.91	0.90	0.92	0.88	0.91	0.91



**Figure 1. Mean trust in regulators and regulatees per country and sector with 95% confidence intervals.** Note: The trust scale in the figure ranges from 1 – very low trust to 7 – very high trust.

From Figure 1 we can observe that the levels of trust in the regulator in the three domains are slightly, but consistently higher than those of the regulatees. They are also above the neutral midpoint of 4 on the scale, which signifies that the overall levels of trust in the regulator are relatively high in all six countries. Citizens' trust in both regulators and regulatees appears to be the highest in the Netherlands and Norway, while the lowest in Israel. Finally, from the three sectors, we can see that the data protection and food safety sectors enjoy higher levels of citizens' trust than the finance sector.

## 2.2 Manipulation checks

To test whether the respondents perceived our manipulations of the regulator's enforcement style as intended, the experiment included three manipulation checks, one for each of the three dimensions of enforcement: formalism, coerciveness, and accommodation. To avoid overburdening the respondents, revealing the goal of the experiment, and making the experiment lengthy, we opted for placing the manipulation checks only after the last displayed scenario, rather than after each of the three. Since the order in which the three scenarios were displayed was randomized, the manipulation checks apply to a random selection of the scenarios from the three domains. The three manipulation checks items, the dimensions they are intended to capture, and the results from their analysis is presented in Table 6.



**Table 6. Manipulation check analysis per dimension of enforcement and country.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per country denote significance at 0.05 level with Tukey correction for multiple comparisons. The questions were asked on a scale of 1 – “Completely disagree” to 7 – “Completely agree”.

Manipulation check per dimension of enforcement		Belgium	Germany	Denmark	Israel	Norway	Netherlands
<i>In the last text that was presented to you, the regulatory agency...</i>							
<b>Formalism</b>							
<i>...interpreted the rules in a strict manner.</i>	<i>high treatment</i>	4.80 <sup>a</sup> (1.37) n = 413	4.95 <sup>a</sup> (1.44) n = 411	4.30 <sup>a</sup> (1.47) n = 426	4.22 <sup>a</sup> (1.75) n = 433	4.77 <sup>a</sup> (1.43) n = 395	5.18 <sup>a</sup> (1.34) n = 443
	<i>low treatment</i>	4.46 <sup>b</sup> (1.43) n = 406	4.11 <sup>b</sup> (1.67) n = 426	3.92 <sup>b</sup> (1.42) n = 435	3.58 <sup>b</sup> (1.68) n = 437	4.24 <sup>b</sup> (1.47) n = 459	4.78 <sup>b</sup> (1.50) n = 411
	<i>control</i>	4.70 <sup>ab</sup> (1.30) n = 118	4.48 <sup>b</sup> (1.39) n = 110	4.00 <sup>ab</sup> (1.41) n = 106	3.78 <sup>b</sup> (1.32) n = 107	4.38 <sup>b</sup> (1.45) n = 122	4.88 <sup>ab</sup> (1.32) n = 102
<b>Coerciveness</b>							
<i>...gave severe punishment to the regulatee.</i>	<i>high treatment</i>	4.62 <sup>a</sup> (1.46) n = 386	4.98 <sup>a</sup> (1.49) n = 405	4.61 <sup>a</sup> (1.38) n = 451	4.33 <sup>a</sup> (1.71) n = 419	4.83 <sup>a</sup> (1.43) n = 422	5.20 <sup>a</sup> (1.29) n = 416
	<i>low treatment</i>	4.00 <sup>b</sup> (1.51) n = 433	3.55 <sup>b</sup> (1.77) n = 432	3.58 <sup>b</sup> (1.54) n = 410	3.32 <sup>b</sup> (1.68) n = 450	3.98 <sup>b</sup> (1.50) n = 432	4.21 <sup>b</sup> (1.66) n = 438
	<i>control</i>	4.44 <sup>a</sup> (1.39) n = 119	4.19 <sup>c</sup> (1.62) n = 110	4.09 <sup>c</sup> (1.46) n = 106	3.75 <sup>c</sup> (1.67) n = 107	4.24 <sup>b</sup> (1.52) n = 122	4.50 <sup>b</sup> (1.48) n = 102
<b>Accommodation</b>							
<i>...included the regulatee in its assessment.</i>	<i>high treatment</i>	4.86 <sup>a</sup> (1.29) n = 415	4.78 <sup>a</sup> (1.41) n = 429	4.58 <sup>a</sup> (1.29) n = 428	4.32 <sup>a</sup> (1.53) n = 425	4.85 <sup>a</sup> (1.22) n = 437	5.06 <sup>a</sup> (1.32) n = 428
	<i>low treatment</i>	4.12 <sup>b</sup> (1.56) n = 405	3.89 <sup>b</sup> (1.68) n = 408	3.76 <sup>b</sup> (1.48) n = 433	3.40 <sup>b</sup> (1.70) n = 445	4.09 <sup>b</sup> (1.54) n = 418	3.98 <sup>b</sup> (1.78) n = 426
	<i>control</i>	4.40 <sup>b</sup> (1.36) n = 119	4.13 <sup>b</sup> (1.26) n = 110	4.26 <sup>a</sup> (1.21) n = 106	3.84 <sup>c</sup> (1.44) n = 107	4.43 <sup>c</sup> (1.41) n = 122	4.56 <sup>c</sup> (1.45) n = 102



The results in Table 6 show that the high and low conditions of the three dimensions of enforcement are perceived as significantly different and in the anticipated direction, in all six country samples. This confirms that our participants perceived the experimental manipulations as intended. The values of the control condition, in turn, are consistently between those of the high and low treatment conditions. In a number of cases, the control condition is also significantly different from the treatment groups, particularly the high treatment, but this effect does not appear universally.

It is important to mention that the experimental manipulations were already tested once before during the development of the experiment. Specifically, to ensure that our experimental manipulations are perceived as intended, we run a small-scale survey in each of the six countries, including only the vignettes from the three sectors, the experimental manipulations and the manipulation checks. The results displayed that the participants did perceive the manipulations as intended (see section 3.3 in D5.1, available upon request), just as we observe in the present analysis.

## 2.3 The effects of enforcement style on trust in regulatory agencies

Here we report the experimental results on the effect of the three dimensions of enforcement style on citizens' trust in regulatory agencies. We examine the results for the food safety, finance, and data protection sectors in turn.

### 2.3.1 Food safety sector

To test whether the three dimensions of enforcement have an effect on the trust citizens place in the regulator, we perform a three-way analysis of variance (ANOVA), and thus compare levels of trust in conditions of low versus high formalism, coerciveness, and accommodation respectively. The results of the analysis are presented in Table 7, while Figure 2, Figure 3 and Figure 4 visually display the levels of trust in the food safety regulator per country and formalism, coerciveness, and accommodation treatments respectively.

**Table 7. Group comparisons of trust in food safety sector regulator for formalism, coerciveness and accommodation.** Note: Table displays means, standard deviations in brackets, and sample size (*n*) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Formalism</b>						
high	4.94 <sup>a</sup> (1.42) n = 402	4.75 <sup>a</sup> (1.41) n = 415	4.92 <sup>a</sup> (1.34) n = 415	4.39 <sup>a</sup> (1.48) n = 460	5.09 <sup>a</sup> (1.29) n = 412	5.37 <sup>a</sup> (1.18) n = 418
low	4.82 <sup>a</sup> (1.26) n = 421	4.62 <sup>a</sup> (1.41) n = 434	4.70 <sup>b</sup> (1.37) n = 434	4.15 <sup>b</sup> (1.47) n = 419	4.97 <sup>a</sup> (1.40) n = 463	5.28 <sup>a</sup> (1.21) n = 440
<b>Coerciveness</b>						
high	4.92 <sup>a</sup> (1.32) n = 401	4.84 <sup>a</sup> (1.37) n = 413	4.89 <sup>a</sup> (1.34) n = 453	4.43 <sup>a</sup> (1.51) n = 422	5.09 <sup>a</sup> (1.26) n = 436	5.35 <sup>a</sup> (1.24) n = 436
low	4.83 <sup>a</sup> (1.36) n = 422	4.54 <sup>b</sup> (1.43) n = 436	4.72 <sup>a</sup> (1.38) n = 396	4.12 <sup>b</sup> (1.44) n = 457	4.97 <sup>a</sup> (1.43) n = 439	5.29 <sup>a</sup> (1.15) n = 422





Accommodation						
high	4.91 <sup>a</sup> (1.27) n = 411	4.70 <sup>a</sup> (1.45) n = 439	4.67 <sup>a</sup> (1.37) n = 424	4.21 <sup>a</sup> (1.46) n = 412	5.04 <sup>a</sup> (1.39) n = 460	5.30 <sup>a</sup> (1.26) n = 425
low	4.85 <sup>a</sup> (1.40) n = 412	4.66 <sup>a</sup> (1.36) n = 410	4.95 <sup>b</sup> (1.34) n = 425	4.32 <sup>a</sup> (1.49) n = 467	5.01 <sup>a</sup> (1.30) n = 415	5.35 <sup>a</sup> (1.13) n = 433

From Table 7 we observe that, with regards to **formalism**, citizens in the high formalism group indicated significantly higher levels of trust in the food safety regulator, compared to the citizens in the low formalism group in the Danish and Israeli samples. Higher **coerciveness**, in turn, increased the reported levels of trust in Germany and Israel. Finally, higher levels of **accommodation** are associated with lower levels of citizens trust in the food safety regulator only in Denmark. Thus, we find statistically significant effects on trust only in some aspects of enforcement in Denmark, Israel, Germany.

Table 8 reports the comparison in the levels of reported trust in the food safety regulator for the treatment conditions and the control condition. The results display no significant difference in trust between these two groups in any of the six country samples, and thus no effect of enforcement.

**Table 8. Group comparisons of trust in food safety sector regulator for treatment and control.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per country denote significance at 0.05 level.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Enforcement						
control	4.92 <sup>a</sup> (1.46) n = 116	4.55 <sup>a</sup> (1.40) n = 98	4.65 <sup>a</sup> (1.42) n = 118	3.96 <sup>a</sup> (1.52) n = 99	4.97 <sup>a</sup> (1.36) n = 103	5.52 <sup>a</sup> (1.10) n = 98
treatment	4.88 <sup>a</sup> (1.34) n = 823	4.68 <sup>a</sup> (1.41) n = 849	4.81 <sup>a</sup> (1.36) n = 849	4.27 <sup>a</sup> (1.48) n = 879	5.03 <sup>a</sup> (1.35) n = 875	5.32 <sup>a</sup> (1.20) n = 858



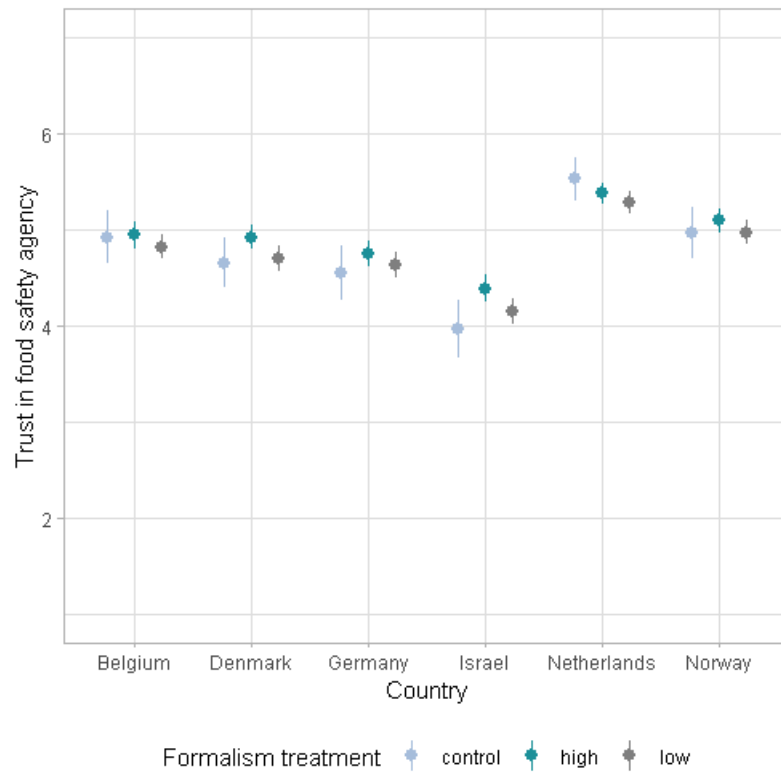


Figure 2. Trust in food safety agency per formalism treatment (95% confidence intervals)

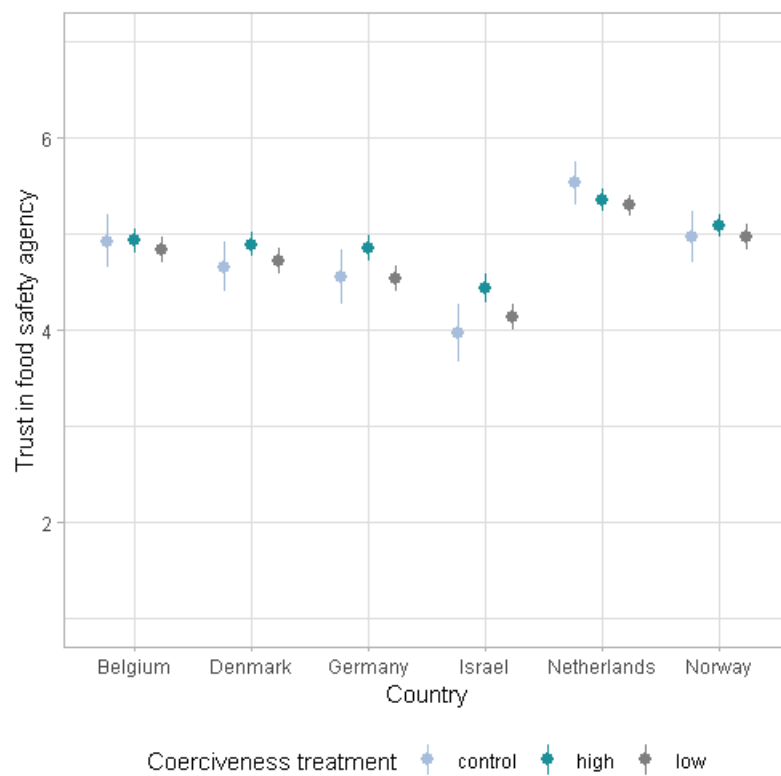


Figure 3. Trust in food safety agency per coerciveness treatment (95% confidence intervals)



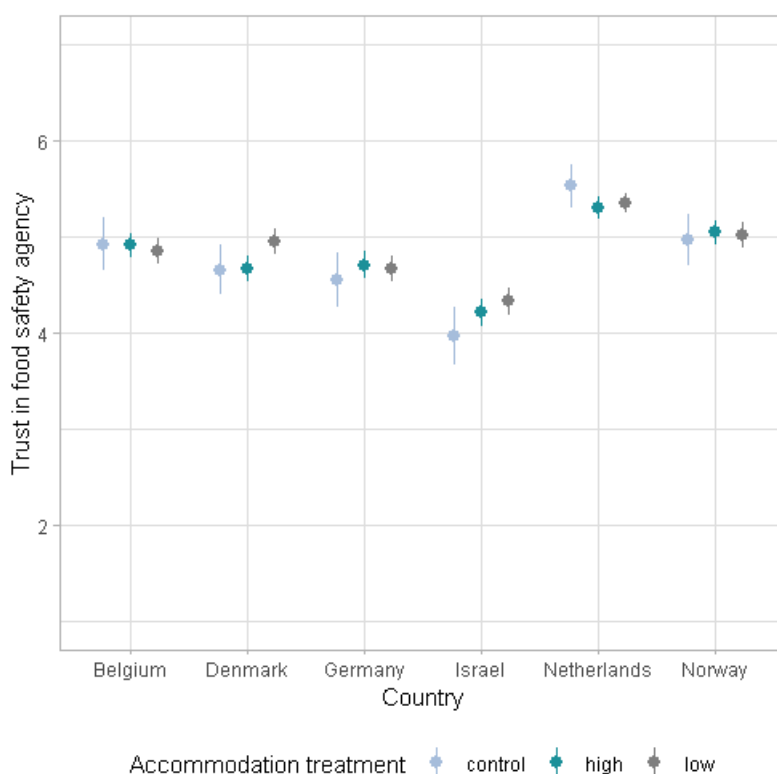


Figure 4. Trust in food safety agency per accommodation treatment (95% confidence intervals)

### 2.3.2 Finance sector

Here we report on the analysis on the effect of enforcement style on trust in the finance sector regulator. Table 9 presents the comparison between the high and low manipulation of the three dimensions of enforcement style, while Table 10 compares the treatment groups with the control groups. Figure 5, Figure 6 and Figure 7 visually display the mean trust levels in the finance regulator in all experimental groups per country and dimension of enforcement.

**Table 9. Group comparisons of trust in finance sector regulator for formalism, coerciveness and accommodation.**

Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Formalism</b>						
high	4.76 <sup>a</sup> (1.29) n = 430	4.51 <sup>a</sup> (1.46) n = 427	4.66 <sup>a</sup> (1.39) n = 414	4.33 <sup>a</sup> (1.38) n = 435	5.18 <sup>a</sup> (1.24) n = 421	5.18 <sup>a</sup> (1.26) n = 417
low	4.61 <sup>a</sup> (1.34) n = 394	4.38 <sup>a</sup> (1.45) n = 420	4.52 <sup>a</sup> (1.41) n = 444	4.25 <sup>a</sup> (1.42) n = 422	5.05 <sup>a</sup> (1.22) n = 439	5.18 <sup>a</sup> (1.29) n = 435
<b>Coerciveness</b>						
high	4.69 <sup>a</sup> (1.36)	4.54 <sup>a</sup> (1.44)	4.76 <sup>a</sup> (1.40)	4.36 <sup>a</sup> (1.36)	5.20 <sup>a</sup> (1.20)	5.26 <sup>a</sup> (1.26)



	n = 380	n = 392	n = 418	n = 423	n = 442	n = 440
low	4.68 <sup>a</sup> (1.28)	4.37 <sup>a</sup> (1.46)	4.43 <sup>b</sup> (1.38)	4.23 <sup>a</sup> (1.43)	5.01 <sup>b</sup> (1.26)	5.08 <sup>b</sup> (1.28)
	n = 444	n = 455	n = 440	n = 434	n = 418	n = 412
Accommodation						
high	4.68 <sup>a</sup> (1.31)	4.45 <sup>a</sup> (1.42)	4.63 <sup>a</sup> (1.38)	4.33 <sup>a</sup> (1.40)	5.20 <sup>a</sup> (1.14)	5.25 <sup>a</sup> (1.21)
	n = 431	n = 421	n = 452	n = 447	n = 437	n = 436
low	4.70 <sup>a</sup> (1.32)	4.44 <sup>a</sup> (1.48)	4.55 <sup>a</sup> (1.42)	4.26 <sup>a</sup> (1.40)	5.01 <sup>b</sup> (1.31)	5.09 <sup>a</sup> (1.33)
	n = 393	n = 426	n = 406	n = 410	n = 423	n = 416

The results presented in Table 9 indicate that the level of **formalism** does not affect citizens' levels of trust in the finance regulator in any of the six countries. **Coerciveness**, however, appears to have an effect on the levels of trust in Norway and the Netherlands, where higher levels of coerciveness lead to higher levels of trust in the regulator. Finally, the level of **accommodation** only affected the levels of trust of the citizens of Norway, and contrary to our expectations, higher levels of accommodation also led to higher levels of trust. When it comes to the comparison between the treatment and control groups, we find that the enforcement treatment significantly increased the levels of trust in the finance sector regulator only in the German sample.

**Table 10. Group comparisons of trust in finance sector regulator for treatment and control.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Enforcement						
control	4.54 <sup>a</sup> (1.29)	4.12 <sup>a</sup> (1.42)	4.46 <sup>a</sup> (1.54)	4.31 <sup>a</sup> (1.42)	5.19 <sup>a</sup> (1.14)	5.28 <sup>a</sup> (1.04)
	n = 115	n = 100	n = 109	n = 121	n = 118	n = 104
treatment	4.68 <sup>a</sup> (1.32)	4.45 <sup>b</sup> (1.45)	4.59 <sup>a</sup> (1.40)	4.29 <sup>a</sup> (1.40)	5.11 <sup>a</sup> (1.23)	5.18 <sup>a</sup> (1.27)
	n = 824	n = 847	n = 858	n = 857	n = 860	n = 852



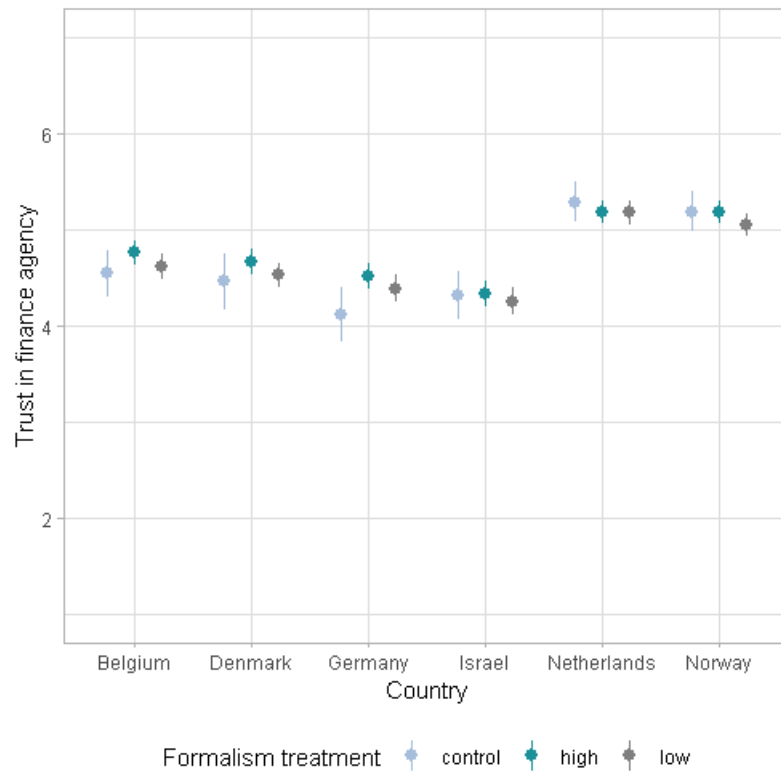


Figure 5. Trust in finance agency per formalism treatment (95% confidence intervals)

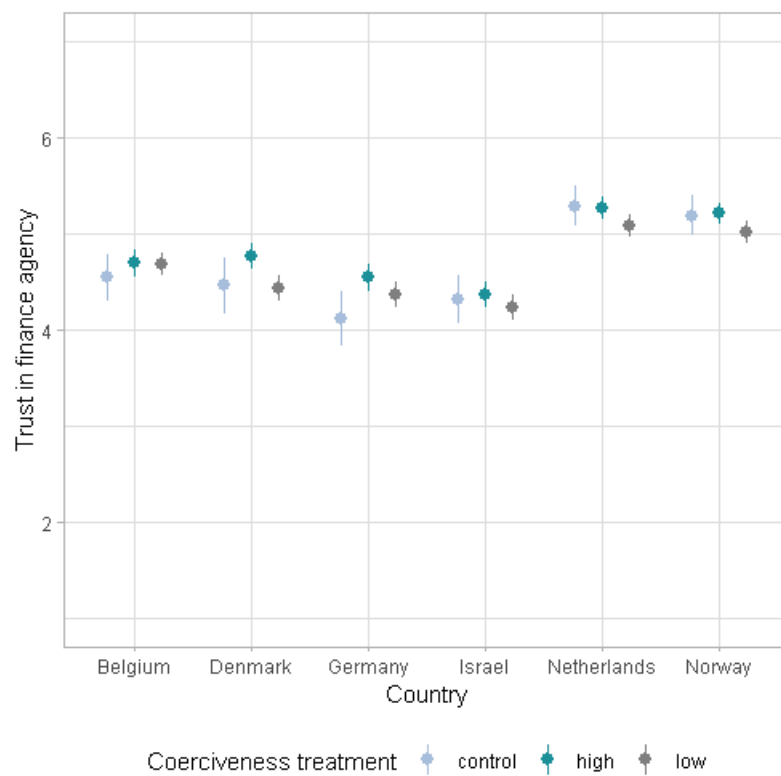


Figure 6. Trust in finance agency per coerciveness treatment (95% confidence intervals)



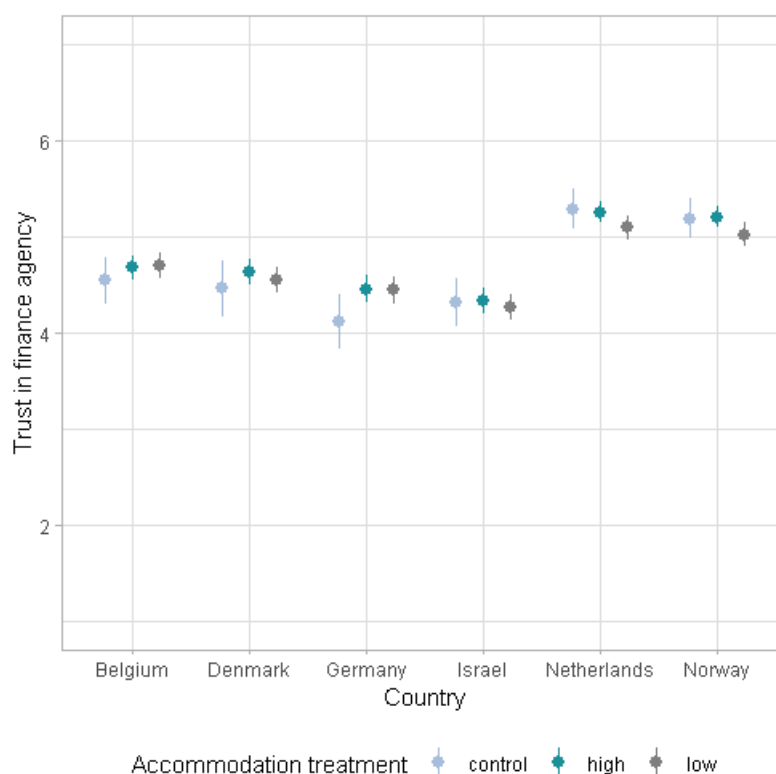


Figure 7. Trust in finance agency per accommodation treatment (95% confidence intervals)

### 2.3.3 Data protection sector

We now present the analysis on the effects of enforcement style on the trust in the data protection regulator. The comparisons between the high and low treatments of the three dimensions of enforcement are reported in Table 11, while the comparison between the treatment and control groups in Table 12. Figure 8, Figure 9 and Figure 10 visually present the mean levels of trust in the data protection regulator per experimental group, dimension of enforcement and country.

Table 11. Group comparisons of trust in data sector regulator for formalism, coerciveness and accommodation.

Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Formalism</b>						
high	4.92 <sup>a</sup> (1.20) n = 405	4.80 <sup>a</sup> (1.40) n = 424	4.82 <sup>a</sup> (1.37) n = 397	4.79 <sup>a</sup> (1.30) n = 446	5.39 <sup>a</sup> (1.20) n = 426	5.44 <sup>a</sup> (1.16) n = 454
low	4.82 <sup>a</sup> (1.34) n = 429	4.82 <sup>a</sup> (1.29) n = 418	4.66 <sup>a</sup> (1.33) n = 459	4.46 <sup>b</sup> (1.41) n = 432	5.29 <sup>a</sup> (1.21) n = 453	5.22 <sup>b</sup> (1.15) n = 402
<b>Coerciveness</b>						
high	4.85 <sup>a</sup> (1.30)	4.89 <sup>a</sup> (1.29)	4.82 <sup>a</sup> (1.25)	4.66 <sup>a</sup> (1.34)	5.42 <sup>a</sup> (1.13)	5.26 <sup>a</sup> (1.21)



	n = 426	n = 416	n = 408	n = 431	n = 451	n = 399
low	4.89 <sup>a</sup> (1.24)	4.73 <sup>a</sup> (1.39)	4.65 <sup>a</sup> (1.43)	4.59 <sup>a</sup> (1.39)	5.25 <sup>b</sup> (1.28)	5.40 <sup>a</sup> (1.11)
	n = 408	n = 426	n = 448	n = 447	n = 428	n = 457
Accommodation						
high	4.88 <sup>a</sup> (1.24)	4.96 <sup>a</sup> (1.30)	4.76 <sup>a</sup> (1.36)	4.54 <sup>a</sup> (1.39)	5.35 <sup>a</sup> (1.19)	5.40 <sup>a</sup> (1.19)
	n = 442	n = 409	n = 434	n = 450	n = 455	n = 423
low	4.85 <sup>a</sup> (1.31)	4.67 <sup>b</sup> (1.37)	4.70 <sup>a</sup> (1.34)	4.73 <sup>b</sup> (1.34)	5.33 <sup>a</sup> (1.22)	5.28 <sup>a</sup> (1.12)
	n = 392	n = 433	n = 422	n = 428	n = 424	n = 433

From Table 11 we observe that the level of **formalism** has an effect on citizens' trust in the data protection regulator in Israel and the Netherlands, and concurrent with our hypothesis, higher levels of formalism also lead to higher levels of trust. Only in Norway the level of **coerciveness** was found to affect the levels of trust in the data protection regulator, and again in line with our hypothesis, higher levels of coerciveness lead to higher levels of trust. The level of **accommodation** affected the levels of trust in the data protection regulator in the Germany and Israel samples, but while the effect in Israel was in line with our hypothesis: higher levels of accommodation led to lower levels of trust, the opposite effect was observed in Germany. The enforcement treatment increased the trust citizens place in the data protection regulator in Israel, however, the opposite effect was found in Norway, as Table 12 displays.

**Table 12. Group comparisons of trust in data protection sector regulator for treatment and control.** *Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level.*

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Enforcement						
control	4.74 <sup>a</sup> (1.13)	4.77 <sup>a</sup> (1.34)	4.77 <sup>a</sup> (1.41)	4.32 <sup>a</sup> (1.48)	5.59 <sup>a</sup> (1.15)	5.35 <sup>a</sup> (1.22)
	n = 105	n = 105	n = 111	n = 100	n = 99	n = 100
treatment	4.87 <sup>a</sup> (1.27)	4.81 <sup>a</sup> (1.34)	4.73 <sup>a</sup> (1.35)	4.63 <sup>b</sup> (1.36)	5.34 <sup>b</sup> (1.21)	5.34 <sup>a</sup> (1.16)
	n = 834	n = 842	n = 856	n = 878	n = 879	n = 856



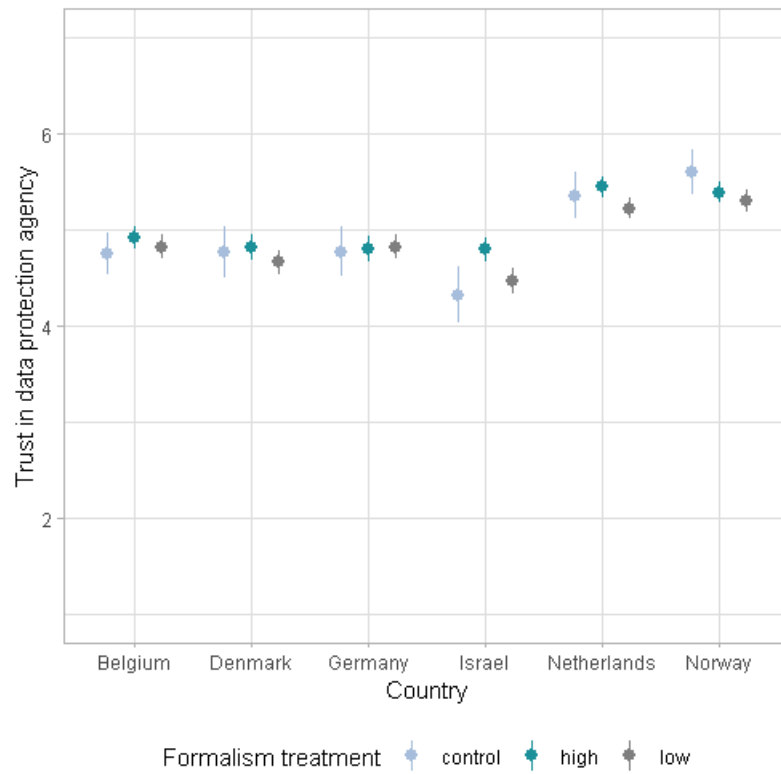


Figure 8. Trust in data protection agency per formalism treatment (95% confidence intervals)

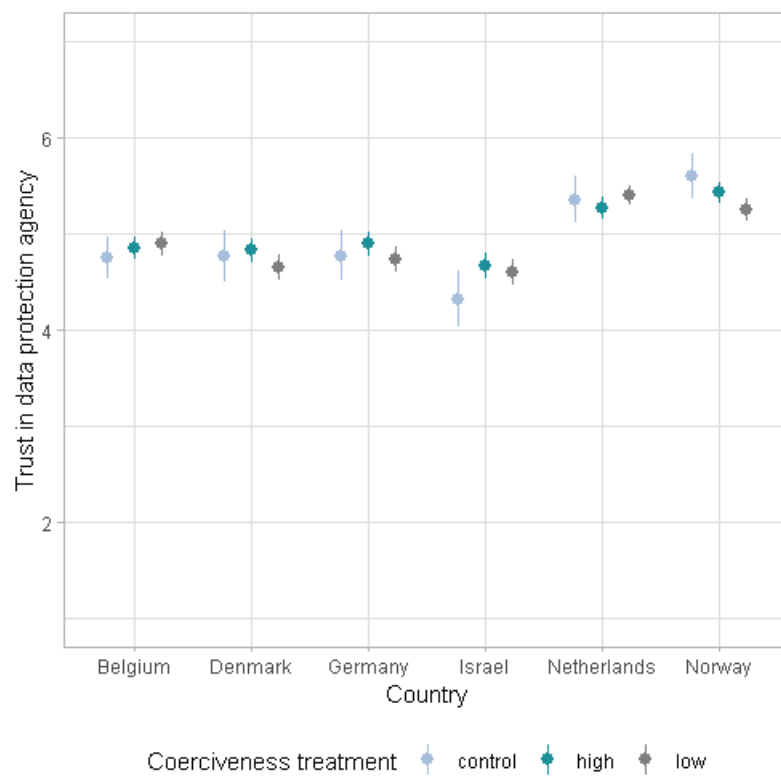


Figure 9. Trust in data protection agency per coerciveness treatment (95% confidence intervals)





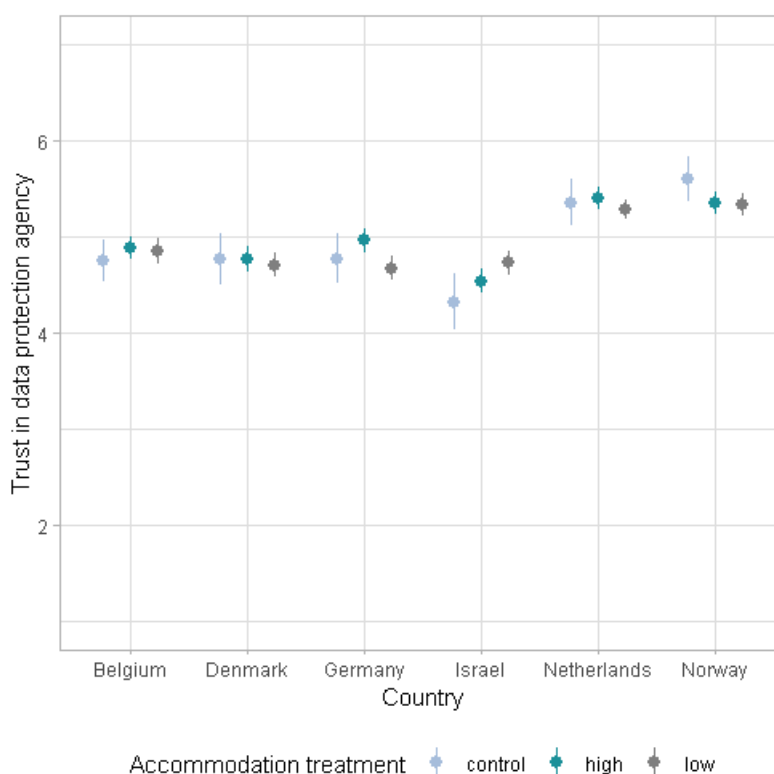


Figure 10. Trust in data protection agency per accommodation treatment (95% confidence intervals)

## 2.4 The effects of enforcement style on trust in regulatees

We now turn to the analysis of the effects of regulatory enforcement on citizens' trust in regulatees. We discuss the results from the food safety sector, the finance sector, and the data protection sector in turn.

### 2.4.1 Food safety sector

Table 13 reports the contrast between the high and low treatments of the three dimensions of enforcement: formalism, coerciveness, and accommodation. In Table 14, the contrast between the treatment and control groups is presented. Figure 11, Figure 12 and Figure 13 present the levels of citizens' trust in the food safety regulator in three experimental groups and six countries per formalism, coerciveness, and accommodation manipulation respectively.

Table 13. Group comparisons of trust in food safety sector regulatees for formalism, coerciveness and accommodation. Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Formalism</b>						
high	4.59 <sup>a</sup> (1.25) n = 402	4.01 <sup>a</sup> (1.53) n = 415	3.93 <sup>a</sup> (1.43) n = 415	3.82 <sup>a</sup> (1.35) n = 460	4.67 <sup>a</sup> (1.24) n = 412	4.80 <sup>a</sup> (1.23) n = 418
low	4.35 <sup>b</sup> (1.25)	4.07 <sup>a</sup> (1.50)	3.78 <sup>a</sup> (1.44)	3.65 <sup>a</sup> (1.31)	4.79 <sup>a</sup> (1.15)	4.83 <sup>a</sup> (1.22)



	n = 421	n = 434	n = 434	n = 419	n = 463	n = 440
<b>Coerciveness</b>						
high	4.50 <sup>a</sup> (1.23) n = 401	4.07 <sup>a</sup> (1.50) n = 413	3.94 <sup>a</sup> (1.40) n = 453	3.86 <sup>a</sup> (1.37) n = 422	4.77 <sup>a</sup> (1.18) n = 436	4.83 <sup>a</sup> (1.29) n = 436
low	4.44 <sup>a</sup> (1.28) n = 422	4.01 <sup>a</sup> (1.53) n = 436	3.76 <sup>a</sup> (1.47) n = 396	3.63 <sup>b</sup> (1.29) n = 457	4.70 <sup>a</sup> (1.21) n = 439	4.81 <sup>a</sup> (1.16) n = 422
<b>Accommodation</b>						
high	4.49 <sup>a</sup> (1.28) n = 411	4.04 <sup>a</sup> (1.56) n = 439	3.88 <sup>a</sup> (1.49) n = 424	3.79 <sup>a</sup> (1.34) n = 412	4.75 <sup>a</sup> (1.18) n = 460	4.75 <sup>a</sup> (1.23) n = 425
low	4.44 <sup>a</sup> (1.23) n = 412	4.04 <sup>a</sup> (1.47) n = 410	3.83 <sup>a</sup> (1.39) n = 425	3.69 <sup>a</sup> (1.33) n = 467	4.72 <sup>a</sup> (1.21) n = 415	4.88 <sup>a</sup> (1.21) n = 433

Table 13 displays that citizens' trust in the regulatees in the food safety sector was affected by the level of **formalism** only in Belgium: higher degrees of formalism led to higher trust. The level of **coerciveness** had an impact on the level of trust only in Israel, with again higher levels of coerciveness leading to higher levels of citizens' trust. **Accommodation** however, did not affect the level of citizens' trust in food safety sector regulatees.

**Table 14. Group comparisons of trust in food safety sector regulatees for treatment and control.** *Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level.*

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Enforcement</b>						
control	4.42 <sup>a</sup> (1.33) n = 116	3.88 <sup>a</sup> (1.42) n = 98	4.03 <sup>a</sup> (1.40) n = 118	3.42 <sup>a</sup> (1.36) n = 99	4.60 <sup>a</sup> (1.18) n = 103	5.00 <sup>a</sup> (1.06) n = 98
treatment	4.47 <sup>a</sup> (1.25) n = 823	4.04 <sup>a</sup> (1.52) n = 849	3.86 <sup>a</sup> (1.44) n = 849	3.74 <sup>b</sup> (1.33) n = 879	4.73 <sup>a</sup> (1.19) n = 875	4.82 <sup>a</sup> (1.22) n = 858

The contrast between the treatment and control groups displayed in Table 14 indicates that the enforcement treatment significantly increases the levels of citizens' trust in the regulatees, however, only in the case of Israel.



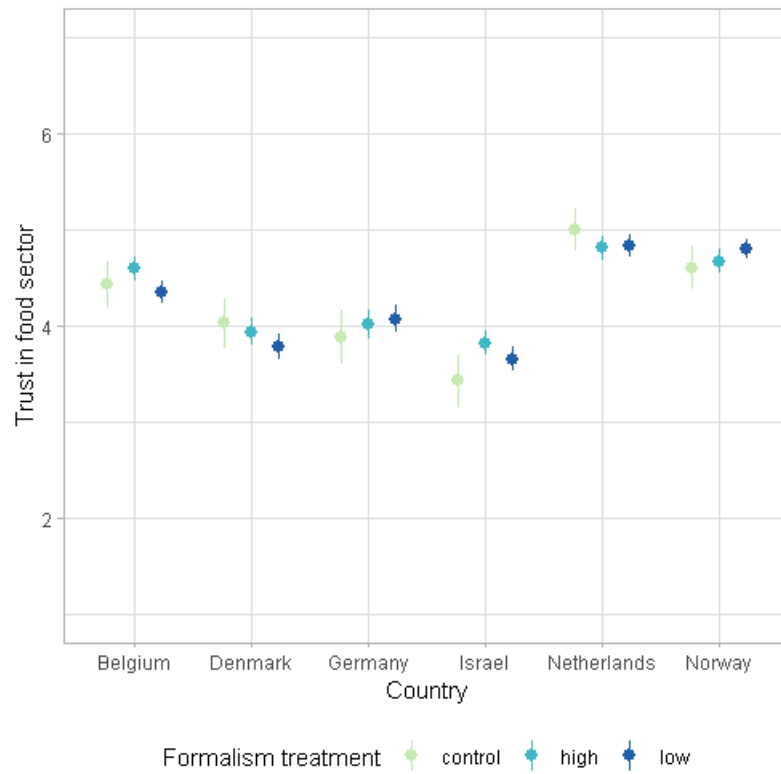


Figure 11. Trust in food safety sector regulatees per formalism treatment (95% confidence intervals)

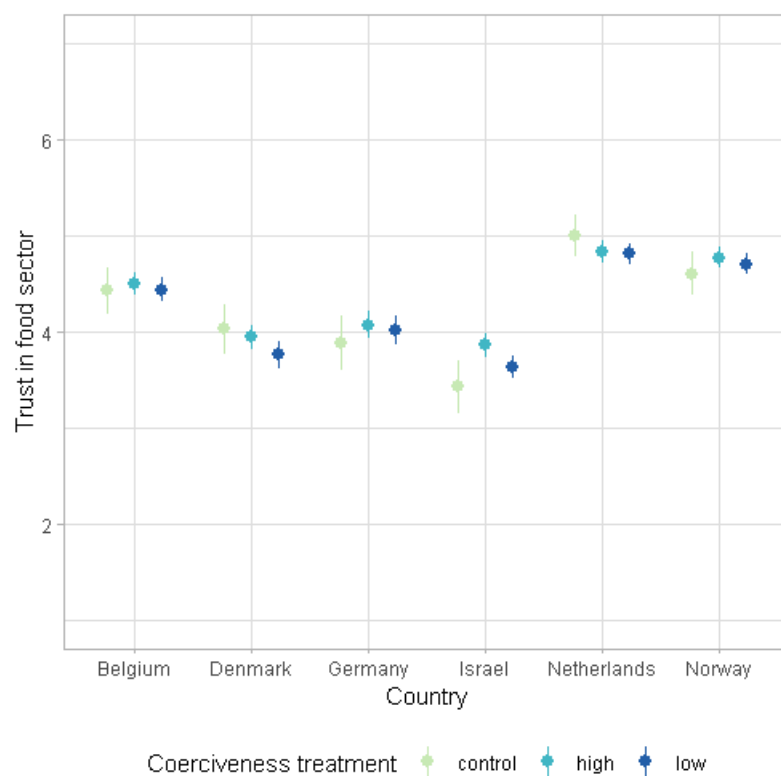


Figure 12. Trust in food safety sector regulatees per coerciveness treatment (95% confidence intervals)



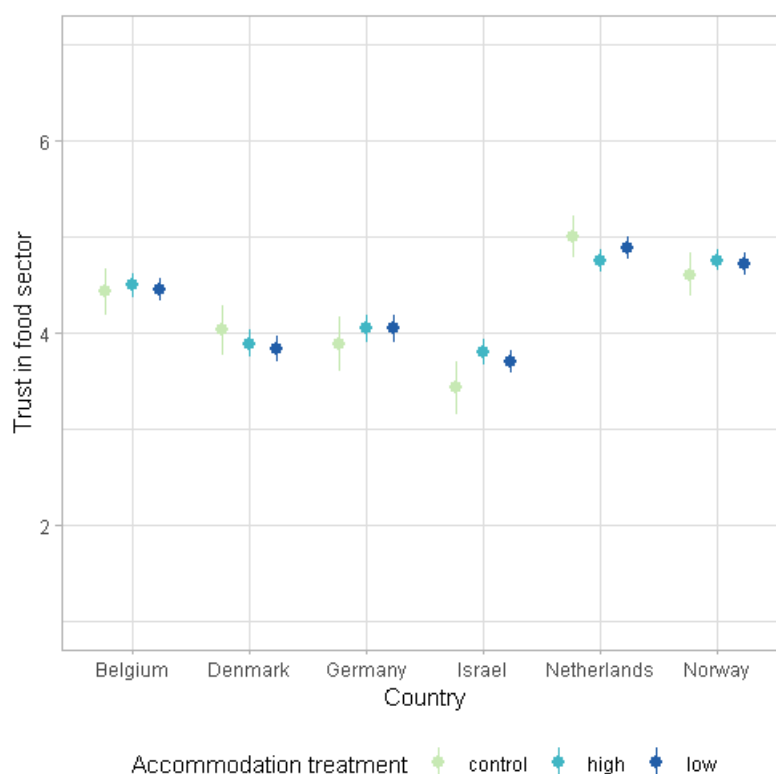


Figure 13. Trust in food safety sector regulatees per accommodation treatment (95% confidence intervals)

## 2.4.2 Finance sector

This section presents the results from the analysis on the effects of enforcement style on citizens' trust in the finance sector regulatees. Table 15 presents the contrast between the high and low conditions of the three investigated dimensions of enforcement, while Table 16 contrasts the treatment and control conditions. Figure 14, Figure 15 and Figure 16 visually display the mean citizens' trust in the finance sector regulatees per country and experimental condition, for the treatments of formalism, coerciveness, and accommodation respectively.

**Table 15. Group comparisons of trust in finance sector regulatees for formalism, coerciveness and accommodation.**  
*Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.*

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Formalism</b>						
high	4.07 <sup>a</sup> (1.36) n = 430	3.95 <sup>a</sup> (1.48) n = 427	3.64 <sup>a</sup> (1.44) n = 414	3.62 <sup>a</sup> (1.37) n = 435	4.47 <sup>a</sup> (1.29) n = 421	4.47 <sup>a</sup> (1.36) n = 417
low	4.04 <sup>a</sup> (1.45) n = 394	3.81 <sup>a</sup> (1.50) n = 420	3.49 <sup>a</sup> (1.46) n = 444	3.72 <sup>a</sup> (1.38) n = 422	4.38 <sup>a</sup> (1.27) n = 439	4.56 <sup>a</sup> (1.39) n = 435
<b>Coerciveness</b>						
high	4.05 <sup>a</sup>	3.82 <sup>a</sup>	3.61 <sup>a</sup>	3.72 <sup>a</sup>	4.49 <sup>a</sup>	4.53 <sup>a</sup>



	(1.40)	(1.46)	(1.44)	(1.35)	(1.28)	(1.38)
	n = 380	n = 392	n = 418	n = 423	n = 442	n = 440
low	4.06 <sup>a</sup>	3.93 <sup>a</sup>	3.51 <sup>a</sup>	3.62 <sup>a</sup>	4.36 <sup>a</sup>	4.50 <sup>a</sup>
	(1.41)	(1.52)	(1.46)	(1.40)	(1.28)	(1.37)
	n = 444	n = 455	n = 440	n = 434	n = 418	n = 412
Accommodation						
high	4.05 <sup>a</sup>	3.84 <sup>a</sup>	3.62 <sup>a</sup>	3.73 <sup>a</sup>	4.46 <sup>a</sup>	4.61 <sup>a</sup>
	(1.40)	(1.50)	(1.51)	(1.30)	(1.27)	(1.33)
	n = 431	n = 421	n = 452	n = 447	n = 437	n = 436
low	4.06 <sup>a</sup>	3.92 <sup>a</sup>	3.49 <sup>a</sup>	3.60 <sup>a</sup>	4.39 <sup>a</sup>	4.42 <sup>b</sup>
	(1.41)	(1.49)	(1.38)	(1.45)	(1.29)	(1.42)
	n = 393	n = 426	n = 406	n = 410	n = 423	n = 416

As displayed by Table 15, citizens' trust in the regulatees in the financial domain appears to be mostly unaffected by the enforcement style of the regulator. Only in the Netherlands high **accommodation** leads to significantly higher levels of citizens' trust in the regulatees in the financial sector. Similarly, as Table 16 shows, the treatment of enforcement does not significantly change the reported levels of trust.

**Table 16. Group comparisons of trust in finance sector regulatees for treatment and control.** *Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level.*

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Enforcement						
control	4.02 <sup>a</sup>	3.70 <sup>a</sup>	3.28 <sup>a</sup>	3.56 <sup>a</sup>	4.52 <sup>a</sup>	4.46 <sup>a</sup>
	(1.50)	(1.39)	(1.52)	(1.34)	(1.30)	(1.34)
	n = 115	n = 100	n = 109	n = 121	n = 118	n = 104
treatment	4.05 <sup>a</sup>	3.88 <sup>a</sup>	3.56 <sup>a</sup>	3.67 <sup>a</sup>	4.43 <sup>a</sup>	4.51 <sup>a</sup>
	(1.40)	(1.49)	(1.45)	(1.38)	(1.28)	(1.38)
	n = 824	n = 847	n = 858	n = 857	n = 860	n = 852



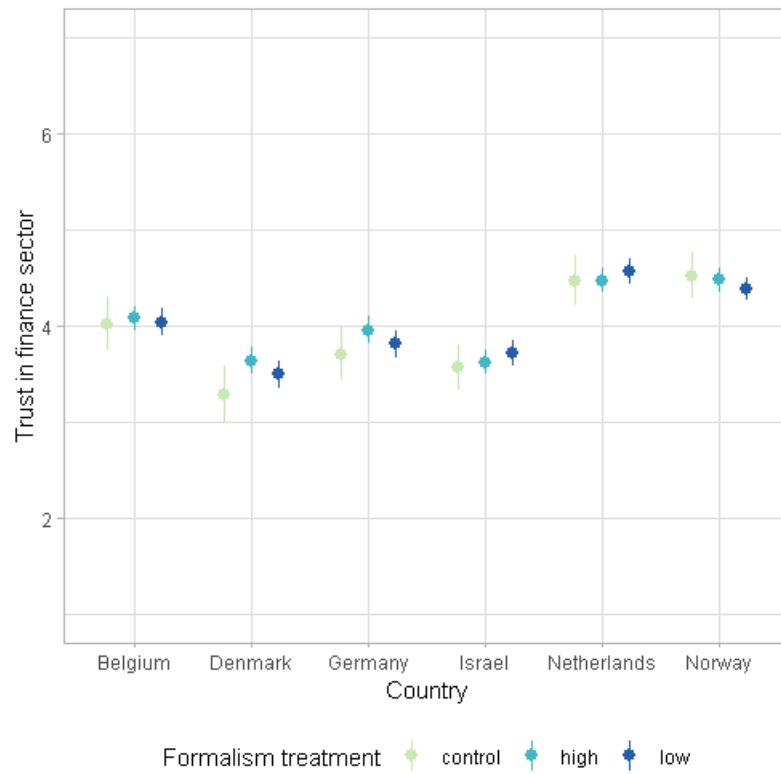


Figure 14. Trust in finance sector regulatees per formalism treatment (95% confidence intervals)

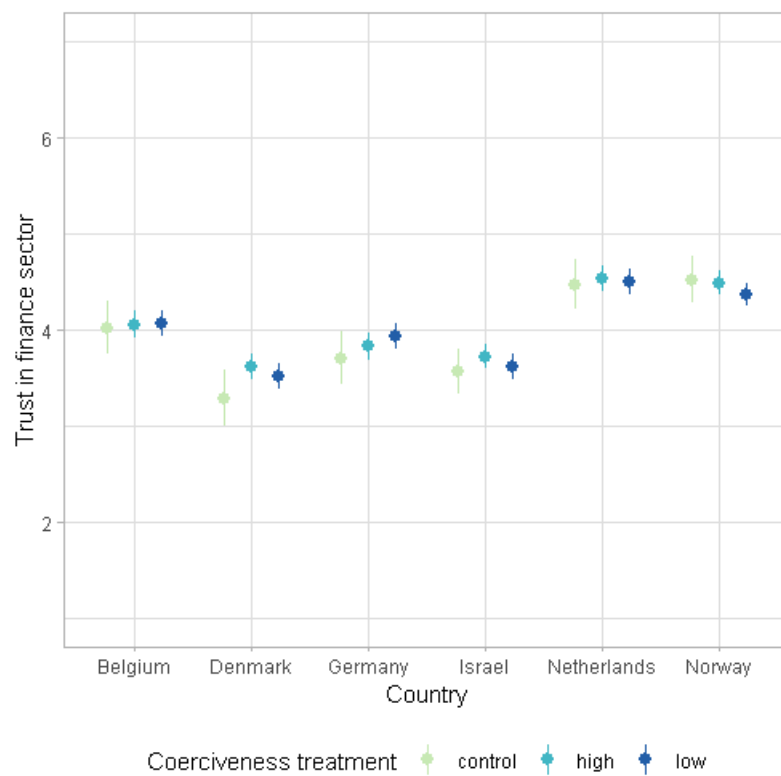


Figure 15. Trust in finance sector regulatees per coerciveness treatment (95% confidence intervals)



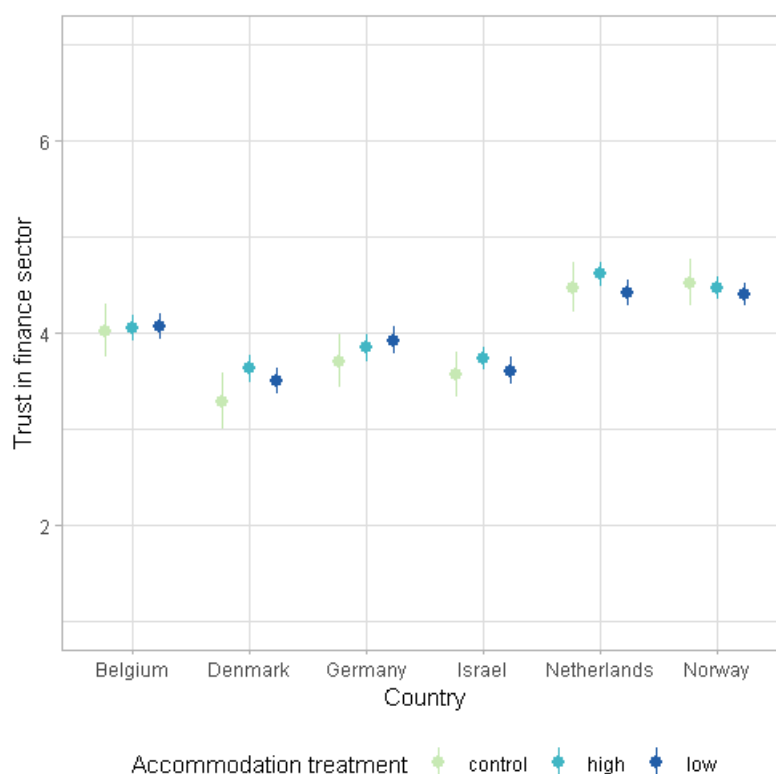


Figure 16. Trust in finance sector regulatees per formalism treatment (95% confidence intervals)

### 2.4.3 Data protection sector

Here we report on the analysis of citizens' trust in the data protection sector regulatees. Table 17 reports on the effects of the treatment effects of the three dimensions of enforcement: formalism, coerciveness, and accommodation, while Table 18 presents the contrast between the treatment and control groups. Figure 17, Figure 18 and Figure 19 provide a visual representation of citizens' reported trust levels in the data protection sector regulatees per enforcement dimension, country, and experimental condition.

**Table 17. Group comparisons of trust in data protection sector regulatees for formalism, coerciveness and accommodation.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Formalism</b>						
high	4.82 <sup>a</sup> (1.23) n = 405	4.44 <sup>a</sup> (1.31) n = 424	4.46 <sup>a</sup> (1.31) n = 397	4.41 <sup>a</sup> (1.34) n = 446	4.93 <sup>a</sup> (1.17) n = 426	5.26 <sup>a</sup> (1.18) n = 454
low	4.84 <sup>a</sup> (1.21) n = 429	4.51 <sup>a</sup> (1.36) n = 418	4.26 <sup>b</sup> (1.38) n = 459	4.20 <sup>b</sup> (1.35) n = 432	4.94 <sup>a</sup> (1.21) n = 453	5.14 <sup>a</sup> (1.12) n = 402
<b>Coerciveness</b>						
high	4.83 <sup>a</sup> (1.23)	4.46 <sup>a</sup> (1.34)	4.36 <sup>a</sup> (1.28)	4.33 <sup>a</sup> (1.34)	4.96 <sup>a</sup> (1.15)	5.16 <sup>a</sup> (1.30)



	n = 426	n = 416	n = 408	n = 431	n = 451	n = 399
low	4.83 <sup>a</sup> (1.22)	4.49 <sup>a</sup> (1.33)	4.35 <sup>a</sup> (1.42)	4.29 <sup>a</sup> (1.36)	4.92 <sup>a</sup> (1.23)	5.24 <sup>a</sup> (1.14)
	n = 408	n = 426	n = 448	n = 447	n = 428	n = 457
Accommodation						
high	4.82 <sup>a</sup> (1.25)	4.49 <sup>a</sup> (1.34)	4.35 <sup>a</sup> (1.39)	4.22 <sup>a</sup> (1.36)	4.96 <sup>a</sup> (1.20)	5.25 <sup>a</sup> (1.18)
	n = 442	n = 409	n = 434	n = 450	n = 45	n = 423
low	4.84 <sup>a</sup> (1.19)	4.46 <sup>a</sup> (1.33)	4.35 <sup>a</sup> (1.32)	4.41 <sup>b</sup> (1.34)	4.91 <sup>a</sup> (1.18)	5.17 <sup>a</sup> (1.13)
	n = 392	n = 433	n = 422	n = 428	n = 424	n = 433

Table 17 shows that **formalism** significantly increases the level of citizens' trust in data protection regulatees in Denmark and Israel. **Coerciveness** did not have an effect in any of the six samples. Finally, higher **accommodation** was found to significantly lower the levels of citizens' trust only in Israel. The enforcement treatment has a significant negative effect on trust only in Norway (Table 18).

**Table 18. Group comparisons of trust in data protection sector regulatees for treatment and control.** *Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level.*

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Enforcement						
control	4.83 <sup>a</sup> (1.07) n = 105	4.34 <sup>a</sup> (1.48) n = 105	4.50 <sup>a</sup> (1.47) n = 111	4.14 <sup>a</sup> (1.36) n = 100	5.23 <sup>a</sup> (1.30) n = 99	5.06 <sup>a</sup> (1.30) n = 100
treatment	4.83 <sup>a</sup> (1.22) n = 834	4.47 <sup>a</sup> (1.33) n = 842	4.35 <sup>a</sup> (1.35) n = 856	4.31 <sup>a</sup> (1.35) n = 878	4.94 <sup>b</sup> (1.19) n = 879	5.20 <sup>a</sup> (1.26) n = 856





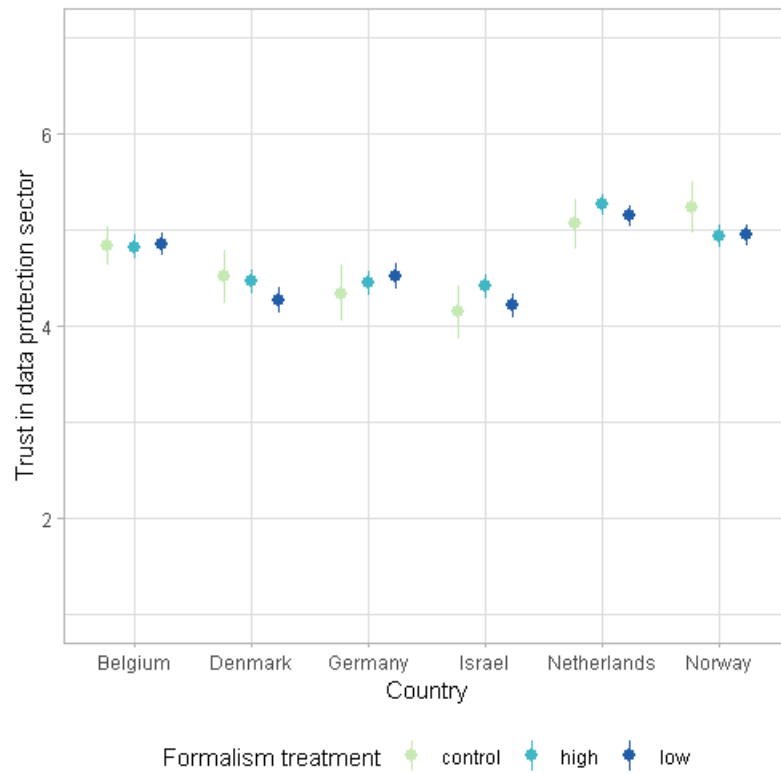


Figure 17. Trust in data protection sector regulatees per formalism treatment (95% confidence intervals)

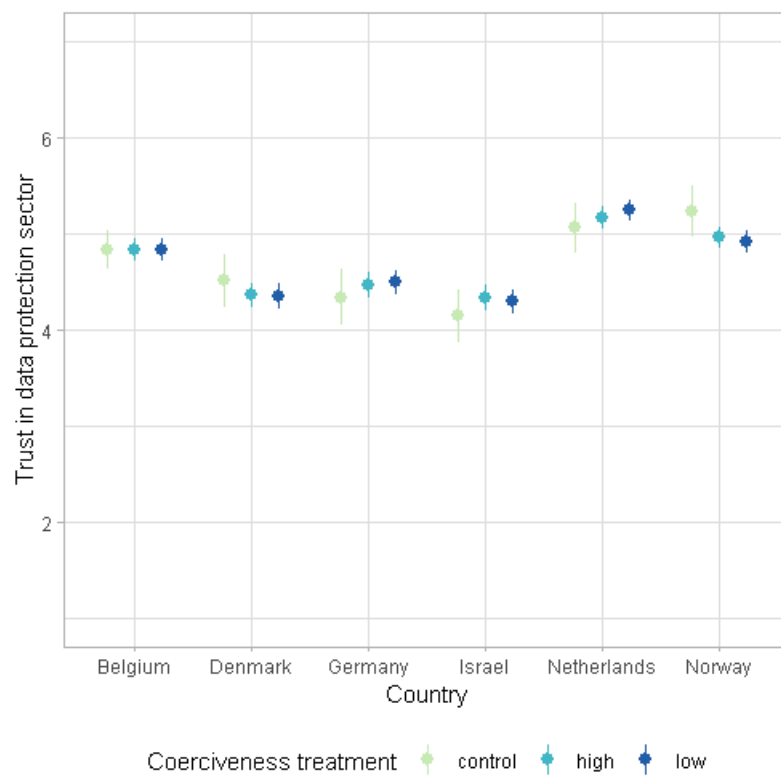


Figure 18. Trust in data protection sector regulatees per coerciveness treatment (95% confidence intervals)



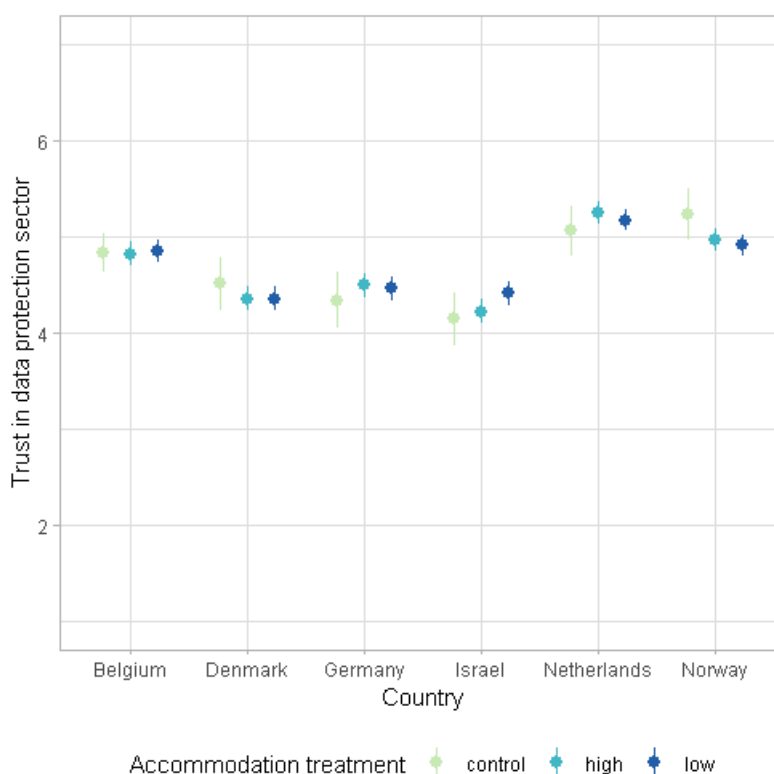


Figure 19. Trust in data protection sector regulatees per accommodation treatment (95% confidence intervals)

## 2.5 Attention check

The survey experiment included a variable intended to test the participants' attentiveness. Towards the end of the survey, among a set of questions whose responses were measured on a slider, the participants were asked to move the slider on that question to 0: *"This question is intended to measure your attentiveness. Move the slider below to 0."* Here we test whether participants' attentiveness significantly impacts the results we observe in the main analysis presented in section 2.3 and 2.4.

Table 19 below displays the number of participants who passed the attentiveness check (placed the slider marker on 0), and the number of participants who failed to do so (placed the slider marker on any other number but 0). We see that the number of participants who failed the attentiveness check varies somewhat from country to country. The highest percentage of participants failing the attentiveness check is in Norway (24%), the lowest in Israel (10%), and the rest of the countries being somewhere in between. In the following analysis, we exclude the participants who failed the manipulation check, and reanalyse the data.

Table 19. Participants who passed and failed the attention check

	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Attention check passed	725	802	765	875	736	766
Attention check failed	213	143	197	100	238	188

Table 20 and Table 21 present the analysis of trust in the food safety regulator. The analysis on the reduced sample indicates that the **formalism** manipulation has no significant impact on citizens' trust in the food safety regulator. Thus, the significant effects we observe in Denmark and Israel in the full sample disappear in this reduced sample. Higher **coerciveness** significantly increases the levels of trust in Germany and Israel, while higher **accommodation** significantly decreases the levels of trust in Denmark. These effects are



observed in the original analysis on the full sample as well. When contrasting the treatment and control groups, we observe a significant positive effect of the enforcement treatment on citizens' trust in Israel. This effect does not pass the significance threshold of  $\alpha = 0.05$  in the full sample.

**Table 20. Group comparisons of trust in food safety regulator for formalism, coerciveness and accommodation in subset of participants who passed the attention check.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Formalism</b>						
high	5.04 <sup>a</sup> (1.43) n = 311	4.72 <sup>a</sup> (1.43) n = 351	4.98 <sup>a</sup> (1.34) n = 326	4.38 <sup>a</sup> (1.50) n = 407	5.21 <sup>a</sup> (1.23) n = 306	5.47 <sup>a</sup> (1.16) n = 341
low	4.88 <sup>a</sup> (1.24) n = 320	4.64 <sup>a</sup> (1.40) n = 366	4.81 <sup>a</sup> (1.40) n = 348	4.19 <sup>a</sup> (1.46) n = 379	5.02 <sup>a</sup> (1.41) n = 348	5.43 <sup>a</sup> (1.17) n = 345
<b>Coerciveness</b>						
high	5.05 <sup>a</sup> (1.29) n = 308	4.82 <sup>a</sup> (1.39) n = 345	4.99 <sup>a</sup> (1.36) n = 360	4.46 <sup>a</sup> (1.50) n = 376	5.20 <sup>a</sup> (1.20) n = 332	5.46 <sup>a</sup> (1.22) n = 354
low	4.87 <sup>a</sup> (1.39) n = 323	4.54 <sup>b</sup> (1.42) n = 372	4.78 <sup>b</sup> (1.38) n = 314	4.13 <sup>b</sup> (1.44) n = 410	5.01 <sup>a</sup> (1.45) n = 322	5.44 <sup>a</sup> (1.10) n = 332
<b>Accommodation</b>						
high	4.96 <sup>a</sup> (1.26) n = 321	4.69 <sup>a</sup> (1.45) n = 364	4.71 <sup>a</sup> (1.37) n = 334	4.22 <sup>a</sup> (1.47) n = 373	5.12 <sup>a</sup> (1.38) n = 343	5.46 <sup>a</sup> (1.23) n = 342
low	4.95 <sup>a</sup> (1.42) n = 310	4.67 <sup>a</sup> (1.38) n = 353	5.07 <sup>b</sup> (1.35) n = 340	4.34 <sup>a</sup> (1.49) n = 413	5.09 <sup>a</sup> (1.28) n = 311	5.44 <sup>a</sup> (1.10) n = 344

**Table 21. Group comparisons of trust in food safety regulator for treatment and control in subset of participants who passed the attention check.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per country denote significance at 0.05 level.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Enforcement</b>						
control	4.95 <sup>a</sup> (1.53) n = 94	4.44 <sup>a</sup> (1.41) n = 85	4.68 <sup>a</sup> (1.51) n = 91	3.95 <sup>a</sup> (1.50) n = 89	4.93 <sup>a</sup> (1.40) n = 82	5.65 <sup>a</sup> (1.09) n = 80
treatment	4.96 <sup>a</sup> (1.34) n = 631	4.68 <sup>a</sup> (1.42) n = 717	4.89 <sup>a</sup> (1.37) n = 674	4.28 <sup>b</sup> (1.48) n = 786	5.11 <sup>a</sup> (1.33) n = 654	5.45 <sup>a</sup> (1.16) n = 686



We now turn to the analysis on trust in the finance regulator presented in Table 22 and Table 23. The degree of **formalism** also does not appear to affect the level of trust citizens' report towards the finance regulator. This mirrors the analysis of the full sample. Higher **coerciveness** brings about higher levels of trust in the finance regulator in Denmark. This effect is also found in the full sample analysis, however, the full sample analysis finds the same effect in Norway and the Netherlands as well. Higher **accommodation** in turn, is found to lead to higher citizens' trust in the Netherlands. This effect is not observed in the full sample analysis in the Netherlands, but it is in the case of Norway. Finally, the contrast of control group and treatment groups is significant in Germany, with enforcement treatment leading to higher levels of reported trust, and this picture is identical to the one we observe in the full sample analysis.

**Table 22. Group comparisons of trust in finance regulator for formalism, coerciveness and accommodation in subset of participants who passed the attention check.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Formalism</b>						
high	4.83 <sup>a</sup> (1.33) n = 324	4.51 <sup>a</sup> (1.46) n = 348	4.73 <sup>a</sup> (1.40) n = 319	4.36 <sup>a</sup> (1.39) n = 389	5.27 <sup>a</sup> (1.18) n = 324	5.28 <sup>a</sup> (1.25) n = 328
low	4.68 <sup>a</sup> (1.35) n = 312	4.35 <sup>a</sup> (1.47) n = 367	4.56 <sup>a</sup> (1.42) n = 351	4.28 <sup>a</sup> (1.44) n = 374	5.14 <sup>a</sup> (1.21) n = 317	5.23 <sup>a</sup> (1.28) n = 357
<b>Coerciveness</b>						
high	4.76 <sup>a</sup> (1.42) n = 286	4.50 <sup>a</sup> (1.46) n = 332	4.81 <sup>a</sup> (1.40) n = 317	4.38 <sup>a</sup> (1.38) n = 379	5.27 <sup>a</sup> (1.14) n = 331	5.34 <sup>a</sup> (1.26) n = 356
low	4.74 <sup>a</sup> (1.27) n = 350	4.36 <sup>a</sup> (1.47) n = 383	4.49 <sup>b</sup> (1.40) n = 353	4.26 <sup>a</sup> (1.44) n = 384	5.14 <sup>a</sup> (1.25) n = 310	5.17 <sup>a</sup> (1.27) n = 329
<b>Accommodation</b>						
high	4.76 <sup>a</sup> (1.33) n = 333	4.42 <sup>a</sup> (1.42) n = 354	4.66 <sup>a</sup> (1.40) n = 350	4.37 <sup>a</sup> (1.42) n = 395	5.28 <sup>a</sup> (1.13) n = 332	5.38 <sup>a</sup> (1.16) n = 352
low	4.74 <sup>a</sup> (1.35) n = 303	4.43 <sup>a</sup> (1.51) n = 361	4.62 <sup>a</sup> (1.42) n = 320	4.26 <sup>a</sup> (1.40) n = 368	5.12 <sup>a</sup> (1.26) n = 309	5.13 <sup>b</sup> (1.36) n = 333

**Table 23. Group comparisons of trust in finance regulator for treatment and control in subset of participants who passed the attention check.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per country denote significance at 0.05 level.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Enforcement</b>						
control	4.64 <sup>a</sup> (1.33) n = 89	4.00 <sup>a</sup> (1.41) n = 87	4.45 <sup>a</sup> (1.60) n = 95	4.31 <sup>a</sup> (1.39) n = 112	5.21 <sup>a</sup> (1.12) n = 95	5.34 <sup>a</sup> (1.06) n = 81
treatment	4.75 <sup>a</sup> (1.34) n = 636	4.43 <sup>b</sup> (1.47) n = 715	4.64 <sup>a</sup> (1.41) n = 670	4.32 <sup>a</sup> (1.41) n = 763	5.20 <sup>a</sup> (1.19) n = 641	5.26 <sup>a</sup> (1.27) n = 685



Table 24 and Table 25 present the analysis on citizens' trust in the data protection regulator in the subsample of participants who passed the attention check. From the results we observe that higher **formalism** leads to higher levels of citizens' trust in Israel and the Netherlands, same as in the full sample of participants. Higher **coerciveness** significantly increases citizens' trust in the data protection regulator in Germany and Denmark. In the full sample, we observe this effect only in Norway. Higher **accommodation** increases the levels of trust in Germany and Netherlands. In the full sample, we observe the identical effect in Germany, however, we also observe the reverse effect in Israel. Finally, the enforcement treatment leads to significantly higher levels of citizens' trust in the data protection regulator only in Israel, an effect that we also observe in the full sample, along with the opposite effect in Norway.

**Table 24. Group comparisons of trust in data protection regulator for formalism, coerciveness and accommodation in subset of participants who passed the attention check.** *Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.*

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Formalism</b>						
high	5.04 <sup>a</sup> (1.17) n = 311	4.79 <sup>a</sup> (1.40) n = 358	4.91 <sup>a</sup> (1.37) n = 322	4.86 <sup>a</sup> (1.29) n = 395	5.50 <sup>a</sup> (1.18) n = 316	5.56 <sup>a</sup> (1.09) n = 372
low	4.95 <sup>a</sup> (1.32) n = 330	4.76 <sup>a</sup> (1.31) n = 349	4.73 <sup>a</sup> (1.32) n = 358	4.47 <sup>b</sup> (1.40) n = 391	5.43 <sup>a</sup> (1.13) n = 336	5.33 <sup>b</sup> (1.14) n = 372
<b>Coerciveness</b>						
high	4.97 <sup>a</sup> (1.28) n = 330	4.88 <sup>a</sup> (1.30) n = 348	4.94 <sup>a</sup> (1.24) n = 313	4.72 <sup>a</sup> (1.33) n = 384	5.55 <sup>a</sup> (1.06) n = 342	5.38 <sup>a</sup> (1.18) n = 318
low	5.01 <sup>a</sup> (1.22) n = 311	4.68 <sup>b</sup> (1.40) n = 359	4.71 <sup>b</sup> (1.42) n = 367	4.61 <sup>a</sup> (1.39) n = 402	5.37 <sup>a</sup> (1.25) n = 310	5.52 <sup>a</sup> (1.16) n = 365
<b>Accommodation</b>						
high	5.00 <sup>a</sup> (1.23) n = 345	4.92 <sup>a</sup> (1.30) n = 345	4.83 <sup>a</sup> (1.37) n = 341	4.60 <sup>a</sup> (1.38) n = 404	5.48 <sup>a</sup> (1.14) n = 338	5.56 <sup>a</sup> (1.11) n = 345
low	4.99 <sup>a</sup> (1.28) n = 296	4.64 <sup>b</sup> (1.39) n = 362	4.80 <sup>a</sup> (1.32) n = 339	4.73 <sup>a</sup> (1.34) n = 382	5.44 <sup>a</sup> (1.18) n = 314	5.35 <sup>b</sup> (1.12) n = 338



**Table 25. Group comparisons of trust in data protection regulator for treatment and control in subset of participants who passed the attention check.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per country denote significance at 0.05 level.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Enforcement</b>						
control	4.88 <sup>a</sup> (1.06) n = 641	4.77 <sup>a</sup> (1.33) n = 95	4.82 <sup>a</sup> (1.38) n = 85	4.37 <sup>a</sup> (1.46) n = 89	5.59 <sup>a</sup> (1.09) n = 84	5.51 <sup>a</sup> (1.07) n = 83
treatment	4.99 <sup>a</sup> (1.25) n = 641	4.78 <sup>a</sup> (1.35) n = 707	4.82 <sup>a</sup> (1.35) n = 680	4.67 <sup>b</sup> (1.36) n = 786	5.46 <sup>a</sup> (1.16) n = 652	5.46 <sup>a</sup> (1.12) n = 683

Table 26 and Table 27 report on the effects on citizens' trust in the food safety regulatees. We observe that high **formalism** leads to significantly higher levels of citizens' trust only in Belgium, **coerciveness** has positive effect on trust in Israel, and **accommodation** has no effect on citizens' trust in the food safety regulator in the subsample of participants who passed the attentiveness check. The enforcement treatment leads to significantly higher levels of trust only in Israel. These effects are identical to the ones observed in the full sample analysis.

**Table 26. Group comparisons of trust in food safety regulatees for formalism, coerciveness and accommodation in subset of participants who passed the attention check.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Formalism</b>						
high	4.59 <sup>a</sup> (1.30) n = 311	3.90 <sup>a</sup> (1.50) n = 351	3.85 <sup>a</sup> (1.44) n = 326	3.77 <sup>a</sup> (1.35) n = 407	4.70 <sup>a</sup> (1.22) n = 306	4.80 <sup>a</sup> (1.25) n = 341
low	4.36 <sup>b</sup> (1.26) n = 320	3.97 <sup>a</sup> (1.51) n = 366	3.73 <sup>a</sup> (1.50) n = 348	3.64 <sup>a</sup> (1.30) n = 379	4.81 <sup>a</sup> (1.14) n = 348	4.89 <sup>a</sup> (1.23) n = 345
<b>Coerciveness</b>						
high	4.54 <sup>a</sup> (1.22) n = 308	3.96 <sup>a</sup> (1.49) n = 345	3.86 <sup>a</sup> (1.47) n = 360	3.82 <sup>a</sup> (1.36) n = 376	4.85 <sup>a</sup> (1.13) n = 332	4.85 <sup>a</sup> (1.30) n = 354
low	4.41 <sup>a</sup> (1.34) n = 323	3.92 <sup>a</sup> (1.52) n = 372	3.71 <sup>a</sup> (1.48) n = 314	3.61 <sup>b</sup> (1.29) n = 410	4.67 <sup>a</sup> (1.22) n = 322	4.84 <sup>a</sup> (1.18) n = 332
<b>Accommodation</b>						
high	4.49 <sup>a</sup> (1.29)	3.91 <sup>a</sup> (1.53)	3.80 <sup>a</sup> (1.52)	3.78 <sup>a</sup> (1.33)	4.79 <sup>a</sup> (1.14)	4.79 <sup>a</sup> (1.25)



	n = 321	n = 364	n = 334	n = 373	n = 343	n = 342
low	4.46 <sup>a</sup> (1.27)	3.97 <sup>a</sup> (1.48)	3.78 <sup>a</sup> (1.43)	3.65 <sup>a</sup> (1.32)	4.72 <sup>a</sup> (1.22)	4.90 <sup>a</sup> (1.22)
	n = 310	n = 353	n = 340	n = 413	n = 311	n = 344

**Table 27. Group comparisons of trust in food safety regulatees for treatment and control in subset of participants who passed the attention check.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per country denote significance at 0.05 level.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Enforcement</b>						
control	4.32 <sup>a</sup> (1.34) n = 94	3.69 <sup>a</sup> (1.38) n = 85	3.93 <sup>a</sup> (1.51) n = 91	3.39 <sup>a</sup> (1.33) n = 89	4.63 <sup>a</sup> (1.14) n = 82	5.01 <sup>a</sup> (1.08) n = 80
treatment	4.47 <sup>a</sup> (1.28) n = 631	3.94 <sup>a</sup> (1.50) n = 717	3.79 <sup>a</sup> (1.48) n = 674	3.71 <sup>b</sup> (1.33) n = 786	4.76 <sup>a</sup> (1.18) n = 654	4.85 <sup>a</sup> (1.24) n = 686

We now explore the effect on citizens' trust in the finance regulatees in the subsample of participants who passed the attention check. The results from the analysis are presented in Table 28 and Table 29. As in the full sample, the trust citizens place in the finance sector regulator appears rather stable, and it is only positively affected by higher **accommodation** in the Netherlands.

**Table 28. Group comparisons of trust in finance regulatees for formalism, coerciveness and accommodation in subset of participants who passed the attention check.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
<b>Formalism</b>						
high	3.97 <sup>a</sup> (1.40) n = 324	3.85 <sup>a</sup> (1.46) n = 348	3.54 <sup>a</sup> (1.46) n = 319	3.58 <sup>a</sup> (1.35) n = 389	4.49 <sup>a</sup> (1.29) n = 324	4.44 <sup>a</sup> (1.43) n = 328
low	3.98 <sup>a</sup> (1.48) n = 312	3.70 <sup>a</sup> (1.50) n = 367	3.34 <sup>a</sup> (1.45) n = 351	3.71 <sup>a</sup> (1.40) n = 374	4.32 <sup>a</sup> (1.26) n = 317	4.53 <sup>a</sup> (1.40) n = 357
<b>Coerciveness</b>						
high	3.96 <sup>a</sup> (1.45) n = 286	3.71 <sup>a</sup> (1.45) n = 332	3.48 <sup>a</sup> (1.43) n = 317	3.68 <sup>a</sup> (1.35) n = 379	4.44 <sup>a</sup> (1.24) n = 331	4.50 <sup>a</sup> (1.41) n = 356
low	3.98 <sup>a</sup> (1.43) n = 350	3.82 <sup>a</sup> (1.51) n = 383	3.40 <sup>a</sup> (1.48) n = 353	3.61 <sup>a</sup> (1.40) n = 384	4.37 <sup>a</sup> (1.31) n = 310	4.48 <sup>a</sup> (1.42) n = 329



Accommodation						
high	4.00 <sup>a</sup> (1.46) n = 333	3.70 <sup>a</sup> (1.46) n = 354	3.48 <sup>a</sup> (1.52) n = 350	3.73 <sup>a</sup> (1.30) n = 395	4.44 <sup>a</sup> (1.27) n = 332	4.61 <sup>a</sup> (1.34) n = 352
low	3.94 <sup>a</sup> (1.42) n = 303	3.84 <sup>a</sup> (1.50) n = 361	3.39 <sup>a</sup> (1.38) n = 320	3.55 <sup>a</sup> (1.45) n = 368	4.37 <sup>a</sup> (1.28) n = 309	4.36 <sup>b</sup> (1.47) n = 333

**Table 29. Group comparisons of trust in finance regulatees for treatment and control in subset of participants who passed the attention check.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per country denote significance at 0.05 level.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Enforcement						
control	4.00 <sup>a</sup> (1.55) n = 89	3.56 <sup>a</sup> (1.34) n = 87	3.16 <sup>a</sup> (1.53) n = 95	3.51 <sup>a</sup> (1.30) n = 112	4.54 <sup>a</sup> (1.31) n = 95	4.39 <sup>a</sup> (1.38) n = 81
treatment	3.97 <sup>a</sup> (1.44) n = 636	3.77 <sup>a</sup> (1.48) n = 715	3.44 <sup>a</sup> (1.46) n = 670	3.65 <sup>a</sup> (1.37) n = 763	4.40 <sup>a</sup> (1.28) n = 641	4.49 <sup>a</sup> (1.41) n = 685

Finally, we now look at the effect of enforcement style on citizens' trust in the data protection regulatees in the subsample of participants who passed the attention check. The results from the analysis are presented in Table 30 and Table 31. We see that higher **formalism** leads to higher levels of trust in Denmark, Israel and the Netherlands. This effect is observed in the full sample in the case of Denmark and Israel. **Coerciveness** does not appear to have any effect on trust here, nor in the full sample. **Accommodation** increases the levels of trust in the Netherlands, while in the full sample we observe the opposite effect in Israel. The enforcement treatment does not significantly alter the levels of trust in any direction in the subsample of participants who passed the attention check, while in the full sample the enforcement treatment had a negative effect in Norway.

**Table 30. Group comparisons of trust in data protection regulatees for formalism, coerciveness and accommodation in subset of participants who passed the attention check.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per factor and per country denote significance at 0.05 level with Tukey correction for multiple comparisons.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Formalism						
high	4.87 <sup>a</sup> (1.24) n = 311	4.39 <sup>a</sup> (1.32) n = 358	4.48 <sup>a</sup> (1.35) n = 322	4.43 <sup>a</sup> (1.35) n = 395	4.99 <sup>a</sup> (1.16) n = 316	5.40 <sup>a</sup> (1.09) n = 372
low	4.94 <sup>a</sup> (1.18) n = 330	4.42 <sup>a</sup> (1.38) n = 349	4.26 <sup>b</sup> (1.41) n = 358	4.22 <sup>b</sup> (1.36) n = 391	5.04 <sup>a</sup> (1.13) n = 336	5.21 <sup>b</sup> (1.12) n = 311





Coerciveness						
high	4.89 <sup>a</sup> (1.23) n = 330	4.37 <sup>a</sup> (1.36) n = 348	4.36 <sup>a</sup> (1.34) n = 313	4.37 <sup>a</sup> (1.35) n = 384	5.03 <sup>a</sup> (1.10) n = 342	5.26 <sup>a</sup> (1.12) n = 318
low	4.92 <sup>a</sup> (1.19) n = 311	4.44 <sup>a</sup> (1.34) n = 359	4.36 <sup>a</sup> (1.42) n = 367	4.28 <sup>a</sup> (1.36) n = 402	5.00 <sup>a</sup> (1.19) n = 310	5.36 <sup>a</sup> (1.09) n = 365
Accommodation						
high	4.87 <sup>a</sup> (1.26) n = 345	4.41 <sup>a</sup> (1.36) n = 345	4.32 <sup>a</sup> (1.44) n = 341	4.25 <sup>a</sup> (1.37) n = 404	5.02 <sup>a</sup> (1.18) n = 338	5.40 <sup>a</sup> (1.08) n = 345
low	4.94 <sup>a</sup> (1.15) n = 296	4.40 <sup>a</sup> (1.34) n = 362	4.40 <sup>a</sup> (1.32) n = 339	4.40 <sup>a</sup> (1.33) n = 382	5.02 <sup>a</sup> (1.11) n = 314	5.22 <sup>b</sup> (1.13) n = 338

**Table 31. Group comparisons of trust in data protection regulatees for treatment and control in subset of participants who passed the attention check.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group. Unequal superscripts per country denote significance at 0.05 level.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Enforcement						
control	4.88 <sup>a</sup> (1.11) n = 84	4.35 <sup>a</sup> (1.48) n = 95	4.51 <sup>a</sup> (1.44) n = 85	4.16 <sup>a</sup> (1.38) n = 89	5.27 <sup>a</sup> (1.23) n = 84	5.19 <sup>a</sup> (1.22) n = 83
treatment	4.90 <sup>a</sup> (1.21) n = 641	4.41 <sup>a</sup> (1.35) n = 707	4.36 <sup>a</sup> (1.38) n = 680	4.33 <sup>a</sup> (1.35) n = 786	5.02 <sup>a</sup> (1.15) n = 652	5.31 <sup>a</sup> (1.11) n = 683

In sum, we observe some changes when reanalysing the subsample of participants who passed the attention check, however, these do not appear to be dramatic, and do not challenge our key conclusions from the analysis of the full sample. Thus, in order to avoid introducing additional bias in the data and lowering the statistical power, we proceed using the full sample in the following analyses.

## 2.6 Covariate analysis

The dataset includes a number of additional variables, which we use in a covariate analysis. These include **generalized trust**, preferences about the **role of the government in the economy**, and **knowledge** regarding the work of the regulator. We report the results from the covariate analysis in the following subsections.

### 2.6.1 Generalized trust

Generalized trust has long been associated with institutional trust. Here we include the measure of generalized trust, measured using the question “*In general, how much do you trust most people? Please answer on a scale from ‘0’ to ‘10’, where ‘0’ is do not trust at all and ‘10’ is trust completely.*” in our analysis of the effects of enforcement style on citizens’ trust. We first report on citizens’ trust in the regulatory



agencies, before turning to citizens' trust in regulatees in the three sectors. Table 32 below provides the descriptives of generalized trust, while the analysis of covariance on citizens' trust in the regulators and regulatees in the sectors of food safety, finance and data protection is presented in **Annex 1**.

**Table 32. Overview of generalized trust per country.** *Note: Table displays means, standard deviations in brackets, and sample size (n) per group.*

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Generalized trust	5.62	5.52	6.47	5.80	6.34	6.47
	(2.06)	(2.19)	(2.03)	(2.18)	(2.01)	(1.80)
	n = 937	n = 947	n = 956	n = 975	n = 974	n = 955

With regard to the **food safety regulator**, the results display a consistent and positive relationship between generalized trust and the trust citizens place in the regulator. The inclusion of the generalized trust variable in the analysis of enforcement style, however, does not change the picture we observe in Table 7. Post-hoc analysis with Tukey correction for multiple comparisons displays essentially the same results regarding the effect of formalism, coerciveness and accommodation on citizens' trust in the food safety regulator. Specifically, higher formalism has a positive effect on trust in Denmark and Israel, higher coerciveness has positive effect on trust in Germany and Israel, while higher accommodation has a negative effect on trust in Denmark.

In terms of citizens' trust in the **food safety regulatees**, we observe the same consistent positive relationship between generalized trust and trust in the regulatees. As in the case of the food safety regulator, the inclusion of the generalized trust covariate in the analysis of trust in the food safety regulatees does not change the effects of enforcement style we observed previously in Table 13: formalism is found to significantly increase citizens' trust in the food safety sector regulatees in Belgium, and coerciveness in Israel.

The consistently positive relationship between generalized trust and trust in the regulator persists also in the case of the **financial regulator**. The post-hoc analysis of the impact of the three dimensions of enforcement style on trust in the regulator indicates that only the effect of coerciveness in Denmark persists with the inclusion of the generalized trust covariate, however. The effects of coerciveness in Norway and Netherlands, and the effect of accommodation in Norway fall below the alpha threshold of 0.05 with the inclusion of this covariate.

Generalized trust is significantly positively associated with trust in the **finance regulatees** as well. The inclusion of this covariate in the analysis of citizens' trust in the finance regulatees changes the picture we observed in the main analysis in Table 15 only slightly, as the positive effect of accommodation disappears here.

The positive link between generalized trust and trust in the regulator persists also in the case of the **data protection regulator**. The inclusion of generalized trust as a covariate in the analysis slightly changes the results observed in section 2.3.3. The post-hoc analysis indicates that the effect of high formalism remains positive and significant in Israel and Netherlands, as observed in the main analysis. However, with regards to the effect of accommodation, we only observe a significantly negative effect in Germany, and a positive effect of coerciveness in Denmark.

Finally, generalized trust and trust in the regulatees are also found to be consistently positively associated in the case of **data protection regulatees** as well. The inclusion of this covariate in the analysis of the effects of enforcement style on citizens' trust in the regulatees in the data protection sector, however, moves the observed effects of formalism and accommodation below the threshold of statistical significance.



## 2.6.2 Role of government in the economy

We measured citizens' preferences regarding the role of the government in the economy, using the question: "Think about the economy in general. How strictly should government regulate business to protect the people? Please answer on a scale from '0' to '10', where '0' is "not strictly at all" and '10' is "very strictly". " This variable is also included in the analysis of the effects of enforcement style on citizens' trust in regulators and regulatees as a covariate. Table 33 below presents the descriptives of this variable per country sample. The technical results of the analysis of covariance are presented in Annex 2. Here we discuss the most important findings in the three regulatory sectors in turn.

**Table 33. Overview of preferences regarding the role of the government in the economy per country.** Note: Table displays means, standard deviations in brackets, and sample size (n) per group.

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Role of government in the economy	7.26 (1.89) n = 937	6.94 (2.14) n = 943	6.18 (2.00) n = 957	6.93 (2.18) n = 973	7.09 (2.00) n = 975	7.06 (1.88) n = 955

The inclusion of the role of the government in the economy covariate in the analysis of the trust in the **food safety regulator** displays several interesting findings. First, preferences for stricter regulation are consistently positively related to the trust in the food safety regulator in all countries but Israel. The analysis of covariance displays a positive effect of coerciveness in Germany and Israel, positive effect of formalism in Denmark and Israel, and negative effect of accommodation in Denmark. Thus, the inclusion of this covariate in the analysis did not change the results observed in section 2.3.1.

The association between preferences for strict regulation and trust is much weaker in the case of **food safety regulatees**. These two variables are only significantly positively associated in the Belgian and Dutch samples. The inclusion of this covariate in the analysis of trust in the food safety regulatees, however, did not change the results observed in section 2.4.1: formalism had a positive effect on trust in Belgium, while coerciveness in Israel.

When it comes to the **finance regulator**, we find that citizens' trust in the regulator are consistently positively related to preferences for stricter regulation in all six countries. The inclusion of the role of the government in the economy covariate in the analysis of trust in the regulator, however, changes the picture observed in section 2.3.2 considerably. Specifically, we only observe significant positive effect of coerciveness in Denmark, and positive effect of accommodation in Netherlands. Thus the effects of coerciveness in Norway and Netherlands, and the effect of accommodation in Norway disappear.

Preferences for higher regulation strictness and trust in the **finance sector regulatees** are only significantly positively related in Belgium, Norway, and the Netherlands. The inclusion of this covariate in the analysis does not change the results we observe in 2.4.2 considerably, but the single effect of accommodation in Netherlands disappears.

Trust in the **data protection regulator** and preferences for stricter regulation are consistently positively associated in all six countries. The inclusion of this covariate in the analysis of trust in the data protection regulator, however, changes the picture we observe in section 2.3.3 considerably. Namely formalism is found to be positively associated with trust in Israel and the Netherlands, as in the main analysis, however, accommodation is only positively related to trust in Germany, and no significant effects of coerciveness are found. This means that the inclusion of the covariate in the analysis pushes the negative effect of accommodation in Israel and the positive effect of coerciveness in Norway below the significance threshold.

Finally, trust in the **data protection regulatees** is significantly and positively related to preferences for stricter regulation in Belgium, Denmark, Norway and the Netherlands. The inclusion of this covariate in the analysis



of trust in the data protection regulatees pushes the positive effects of formalism in Denmark and Israel, and the negative effect of accommodation in Israel observed in the main analysis below the significance threshold.

### 2.6.3 Knowledge of the work of the regulator

We measured knowledge regarding the work of the regulator with the question: How knowledgeable would you say you are about the activities of the following agencies? Please answer on a scale from '0' to '100', where '0' is "not knowledgeable at all" and '100' is "complete knowledge". Table 34 below presents the descriptive values of this variable. To estimate the effect of the knowledge of the work of the regulator on the relationship between regulatory enforcement and citizens' trust we use ANCOVA models. Their results are reported in Annex 3.

**Table 34. Overview of knowledge of the work of the regulator per country.** *Note: Table displays means, standard deviations in brackets, and sample size (n) per group.*

Variable	Belgium	Germany	Denmark	Israel	Norway	Netherlands
Knowledge of the work of the food safety regulator	52.66 (25.63) n = 930	45.43 (25.45) n = 946	51.76 (24.04) n = 959	35.00 (29.07) n = 967	58.73 (23.27) n = 975	55.02 (22.61) n = 953
Knowledge of the work of the finance regulator	39.99 (27.09) n = 933	40.59 (27.17) n = 945	42.68 (24.60) n = 962	42.06 (30.37) n = 967	50.36 (26.06) n = 977	49.40 (24.78) n = 954
Knowledge of the work of the data protection regulator	43.56 (25.67) n = 928	43.12 (26.16) n = 946	43.25 (24.48) n = 960	39.08 (29.76) n = 968	55.07 (24.47) n = 973	53.67 (23.51) n = 955

Knowledge of the work of the regulator and trust in the **food safety regulator** are consistently positively related, although this relationship falls short of reaching the threshold of statistical significance in the Israeli sample. The inclusion of this covariate in the analysis of the effects of enforcement style on citizens' trust in the regulator does not change the positive effects of coerciveness in Germany and Israel, and the negative effect of accommodation in Denmark, but it does eliminate the effects of formalism found in the main analysis.

When it comes to **food safety regulatees**, we observe a consistent positive relationship between knowledge in the work of the regulator and trust in the sector's regulatees. The inclusion of the knowledge covariate in the analysis of the effects of enforcement style on trust did not affect the results observed in the main analysis in sector 2.4.3: formalism has a positive effect on trust in Belgium, while coerciveness has positive effect on trust in Israel.

With regards to the **finance regulator**, we again observe a consistent positive relationship between knowledge of the work of the regulator and trust in the regulator. When this covariate is included in the analysis of the impact of enforcement style on trust, we observe rather different results from the ones found in the main analysis presented in 2.3.2. Namely, we observe only positive effect of coerciveness on trust in Denmark, while the effects of coerciveness in Norway and the Netherlands, and the effect of accommodation in Norway disappear.

The positive effect of knowledge on the work of the regulator on trust appears consistently also in the case of **finance regulatees**. With the addition of this covariate in the analysis of enforcement style and trust, the single effect of accommodation in the Netherlands found in the main analysis disappears too.



Knowledge of its work is positively associated with trust in the **data protection regulator** consistently too, except in Denmark, where this relation does not reach statistical significance. When the knowledge variable is added as a covariate in the analysis of enforcement styles and trust in the regulator, we observe positive effects of formalism in Israel and the Netherlands, as well as of accommodation in Germany. This signifies that the effect of coerciveness in Norway and of accommodation in Israel found in the main analysis disappear with the inclusion of this covariate.

Finally, the relationship between the knowledge of the regulator and trust in the **data protection regulatees** is identical as for the data protection regulator: significantly positive except in the case of Denmark. The inclusion of this covariate in the analysis on the effects of enforcement on trust removes the significant effects of formalism and accommodation found in the main analysis in section 2.4.3.



### 3. Discussion of findings

As the previous section points out, the findings from this preliminary analysis of the experimental results are mixed. To more structurally examine the outcomes, we first present an overview of our hypotheses and whether our findings support them. Table 35 shows the hypotheses with regard to the regulator, subsequently Table 36 concerns the regulatees.

#### 3.1 Trust in the regulator

Table 35. Summary of findings regarding trust in the regulator hypotheses

	Regulator
Overall effect	<i>Enforcement (in general) has a positive effect on trust in the regulatory agency, compared to a control group receiving generic information about the regulatory agency.</i>
Result	<p><b>Food safety:</b> rejected (all)</p> <p><b>Finance:</b> partial support (Germany), mostly rejected (all others)</p> <p><b>Data protection:</b> partial support (Israel), mostly rejected (all others), opposite effect (Norway)</p>
Formalism	<i>High formalism (strictness) has a positive effect on trust in the regulatory agency, compared to low formalism.</i>
Result	<p><b>Food safety:</b> partial support (Denmark, Israel), mostly rejected (all others)</p> <p><b>Finance:</b> rejected (all)</p> <p><b>Data protection:</b> partial support (Israel, Netherlands), mostly rejected (all others)</p>
Coerciveness	<i>High coerciveness (punitiveness) has a positive effect on trust in the regulatory agency, compared to low coerciveness.</i>
Result	<p><b>Food safety:</b> partial support (Germany, Israel)</p> <p><b>Finance:</b> partial support (Denmark, Norway, Netherlands), partial reject (others)</p> <p><b>Data protection:</b> partial support (Norway), mostly rejected (all others)</p>
Accommodation	<i>High accommodation has a negative effect on trust in the regulatory agency, compared to low accommodation.</i>
Result	<p><b>Food safety:</b> partial support (Denmark), mostly rejected (all others)</p> <p><b>Finance:</b> rejected with opposite effect (Norway), rejected (all others)</p> <p><b>Data protection:</b> partial support (Israel), opposite effect (Germany), rejected (all others)</p>

The **overall effect hypothesis** – enforcement in general positively affects trust – at best receives partial support. For the finance sector we only find support for Germany and for data protection we see that enforcement increases trust in regulators in Israel. However, the opposite effect is displayed in the data protection sector in Norway. For food safety we should clearly reject the overall effect hypothesis: in none of the countries we found a significant effect. So, in general, enforcement (regardless the enforcement style) has a very limited effect on citizen trust in regulators and in balance we should reject the hypothesis.

When we zoom in on the specific dimensions of enforcement (formalism, coerciveness and accommodation) we again see limited support for our hypotheses. With regard to the **formalism hypothesis**, or the strict interpretation of rules in enforcement, we find this led more citizen trust in Denmark and Israel in the food safety sector and to more trust in the Netherlands and Israel in data protection sector. No effects of formalism were found in the finance sector. Again, we see some support in some sectors in some countries but the evidence for the formalism hypothesis in general is limited. We should reject this hypothesis.



The **coerciveness hypothesis** finds slightly more support in our findings, although results are still mixed at best. We find a positive effect of coerciveness, or the tendency to more strongly punish regulatees, in all sectors. For the food safety sector, we find positive effects in Germany and Israel. For the finance sector this effect can be found in Denmark, Norway and the Netherlands. For data protection a positive effect was only found in Norway. Overall, there is some limited support for the hypothesis.

Finally, the **accommodation hypothesis** only finds very little support in our data. We expected that when the regulatees' perspectives were taken in the enforcement decision it would have a negative effect on trust. However, effects were only in the expected direction in the food safety sector (only in Denmark) and in data protection (in Israel). Remarkably, we also find cases in which accommodation had a positive effect on citizen trust in the finance sector (Norway). Clearly, this hypothesis is to be rejected and the very mixed findings calls for further theoretical reflection on this dimension of enforcement.

Overall, we find that **enforcement and different enforcement styles have a limited effect on citizen trust** in regulatees. For the overall effect hypothesis, the formalism hypothesis and coerciveness hypothesis, the results are in the expected direction (e.g. more formalism leads to more trust), but it is only significant in some instances. **We see that enforcement has a stronger effect in Israel and Denmark**, while other countries only sporadic effects are found. There seem to be no distinct patterns across sectors.

### 3.2 Trust in regulatees

Next, we will discuss the hypotheses with regard to the regulatees (Table 36).

**Table 36. Summary of findings regarding trust in the regulatees hypotheses**

Regulatees	
Overall effect	<i>Enforcement (in general) has a positive effect on trust in regulatees, compared to a control group receiving generic information about the regulatory agency</i>
Result	<b>Food safety:</b> Partial support (Israel), mostly rejected (all others) <b>Finance:</b> rejected (all) <b>Data protection:</b> partial support (Norway), rejected (all others)
Formalism	<i>High formalism (strictness) has a positive effect on trust in regulatees, compared to low formalism.</i>
Result	<b>Food safety:</b> partial support (Belgium), mostly rejected (all others) <b>Finance:</b> rejected (all) <b>Data protection:</b> partial support (Denmark and Israel), mostly rejected (all others)
Coerciveness	<i>High coerciveness (punitiveness) has a positive effect on trust in regulatees, compared to low coerciveness.</i>
Result	<b>Food safety:</b> partial support (Israel), mostly rejected (all) <b>Finance:</b> rejected (all) <b>Data protection:</b> rejected (all)
Accommodation	<i>High accommodation has a negative effect on trust in regulatees, compared to low accommodation.</i>
Result	<b>Food safety:</b> rejected (all) <b>Finance:</b> reject with opposite effect (Netherlands), rejected (all others) <b>Data protection:</b> Partial support (Israel), mostly rejected (all others)



The overall picture that emerged before can also be seen in this set of hypotheses: the results are mixed and provide limited support for our hypotheses. **The overall effect hypothesis** can only be confirmed for Israel (food safety sector) and in Norway (data protection). No overall treatment effect was found for the finance sector. This leads us to reject this hypothesis.

For the **formalism hypothesis** a similar mixed picture emerges. We found an effect in Belgium (food safety) and data protection (Denmark and Israel), but not for the finance sector. Citizen trust in regulatees in other countries was not affected by the degree of formalism. We reject the hypothesis. The **coerciveness hypothesis** is only supported in Israel for the food safety sector, but we find no effect on citizen trust in any other case. Again, we reject the hypotheses. Finally, the **accommodation** is also rejected. There was no effect in the food safety sector (in any country), opposite effect for the finance sector in the Netherlands, and limited support for data protection (Israel).

In general, we find weak to no effects of enforcement style on citizen trust in regulatees, although the patterns are generally in the expected direction. We draw conclusions and reflections on this in the next section.





## 4. Conclusion

### 4.1 Summary of main findings

In general, we find weak to no effects of enforcement style on citizen trust in regulatees, although the patterns are generally in the expected direction. Effects are very context dependent and a few patterns can be detected in these results. Here we outline the main conclusions from the findings displayed by the preliminary analysis (summarized in Table 37).

Table 37. Summary of all observed effects

		Overall effect	Formalism	Coerciveness	Accommodation
Food safety	<i>regulator</i>	no effect	positive effect in Denmark and Israel	positive effect in Germany and Israel	negative effect only in Denmark
	<i>regulatees</i>	positive effect only in Israel	positive effect only in Belgium	positive effect only in Israel	no effect
Finance	<i>regulator</i>	positive effect only in Germany	no effect	positive effect in Denmark, Norway and the Netherlands	positive effect in Norway
	<i>regulatees</i>	no effect	no effect	no effect	positive effect in the Netherlands
Data protection	<i>regulator</i>	positive effect in Israel, negative effect in Norway	positive effect in Israel and Netherlands	positive effect in Norway	positive effect in Germany, negative effect in Israel
	<i>regulatees</i>	positive effect only in Norway	positive effect in Denmark and Israel	no effect	negative effect in Israel

#### ***Countries with low trust are more amenable to enforcement style***

While there is no clear-cut pattern for each country we do see that there is some difference in countries with lower citizen trust in the regulator (Israel, Denmark) and countries with higher trust (Netherlands, Norway). Especially in Israel and Denmark we most frequently find positive effects of enforcement and enforcement styles on citizen trust. In fact if we would have only done the experiment in these two countries, most of the hypotheses regarding the enforcement style of the regulator would have found some stable support.

In high trust countries we do find some effect, but very limited and perhaps this has to do with a ceiling effect: if citizen trust cannot realistically go any higher whatever the enforcement style you have.

#### ***Effects of accommodation are fuzzy***

Where the results for formalism and coerciveness follow the expected pattern, the results for accommodation look very fuzzy: there are mostly null effects, and also some effects opposite from what we expected. There is no clear evidence here and the mixed bag of results suggest we should go back to theory to better understand this dimension of enforcement. Unsurprisingly, there is less agreement in the literature on the meaning of this dimension and how it is connected to enforcement style.



### ***Consistent and strong positive relation with generalized trust, knowledge and role of government in the economy***

In the covariate analysis we found that three covariates had a strong association with citizen trust. People who have high generalized trust (trust in other people) have more trust in regulators and regulatees. The same was found for self-assessed knowledge of the regulator (more knowledge, more trust) and the preferred role of government in regulating the economy (stronger role preferred, more trust).

## **4.2 Discussion, limitations, and further steps**

### **4.2.1 Discussion**

The findings do not show a strong effect of different enforcement styles on citizen trust in regulators or regulatees. This could imply that citizen trust is less dependent on how regulators respond to specific violations of regulatees than might be assumed. It is likely that trust depends on more general or long-term regulatory and regulatee behaviour than on regulatory responses to single incidents.

This implies that specific enforcement interventions are unlikely to result in changes in citizen trust. Our findings only show an increase of citizen trust in situations where trust was low. Here, more coercive interventions and higher formalism, appear to restore trust somewhat. In this section we discuss possible explanations for our findings.

First, 'trust' is conceptually complex and is affected by many personal and environmental determinants. On the personal level, an individual's level of trust of the regulator or regulatee may strongly depend on that individual's general propensity to trust. For instance, this study found that generalized trust, or trust in other people, had strong and consistent correlations with trust in regulatory agencies and regulatees in most countries. An individual's propensity to trust other people, in turn, is formed through life experiences and environmental factors. In this sense, a large portion of variance of an individual's likelihood to trust a regulatory agency may be pre-determined by this individual propensity and will change only slowly with time. A one-off low-intensity intervention may only have a minor contribution.

With regard to environmental determinants, while the overall effect of agency enforcement style was subdued in all participating countries, differences in political economies and legal and administrative cultures (Hertogh 2018; Rothstein 2019) could play a role in the explanation of differences between countries. It is possible that trust in a regulator does not depend on its enforcement style, but on the strength of the underlying regulation and the generally collaborative or adversarial relations between the state and market actors. National political philosophies with regard to risk regulation as well as general trust in the legal system may form the cultural background against which differentiations in enforcement style are interpreted (Borraz et al 2020).

Differences between countries may also stem from cultural differences in punitiveness, as is established in extensive empirical research into punitive attitudes with regard to criminal sentencing (Elffers & De Keijser 2009). Elffers and De Keijser (2009), for example, find that Dutch citizens are significantly more punitive than citizens in other jurisdictions. National differences in punitive attitudes could be part of the explanation of different appreciations of a punitive or accommodating enforcement style, although our findings do not confirm the outcomes of in criminological studies with regard to criminal offenses.

A third possible explanation points to a ceiling effect of trust. In general, we found that trust in regulatory agencies was relatively high in most countries. Perhaps there is just limited room for an increase in trust and is a score of 4 to 5 on a 7-point scale as good as it gets for most regulators. There is some support for the existence of a ceiling effect in our data. The strongest effects were found in Israel, which was the one country with relatively low levels of trust, this may mean that when base trust levels are relatively low, it is also somewhat easier to improve trust by using particular – more punitive and formal – enforcement styles. The findings also imply that in situations where trust is already relatively high (Norway and the Netherlands are examples here), the regulatory enforcement style in individual incidents does not seem to lower trust



directly. In situations where regulators expect that a less formal, more accommodating or less coercive enforcement intervention is more effective in realizing compliance by regulatees, they can choose this strategy without risking jeopardizing citizen trust immediately. Our findings concur with criminological research on punitive attitudes that harsher punishment of crime is not necessarily what the people want (Soot 2013; Cullen et al 2019; Elffers and De Keijser 2009).

At the same time, there is a real possibility that enforcement styles just do not matter much for citizens' trust and that other characteristics of a regulator, such as regulatory independence and transparency, are more important. Perhaps regulatory agencies build more stable reputations upon such foundational principles and is this what matters to citizen trust. The specific way through which regulatory agencies respond to offenses, such as through punitive or more accommodating responses, may be of lesser importance for citizen trust. A crucial feature in trust is that it concerns a 'leap of faith' and that you just have faith in that the object of trust – in this case an agency – is doing the right thing in terms of the way the rules are enforced.

#### 4.2.2 Limitations

The experimental studies reported here inherently suffer from some limitations. First, the experiments employ vignettes, which even though have been modelled to capture likely-to-happen and realistic situations, present only an abstracted image of reality. This might affect the participants' perceptions of the experiments as realistic, and potentially their involvement in them as well.

Second, the experiments focus on the effects of enforcement style on trust in the regulator and regulatees, which is arguably only a small part of the large picture of factors that shape citizens' trust. There are, thus, many potentially relevant trust-shaping aspects that we are unable to account for. The control factors measured in our study relate to trust – in government and in other people. Literature also points to socio-psychological attitudes towards punishment and to political ideology as important factors in determining citizen satisfaction with enforcement (Tyler & Boeckman 1997; Tetlock et al 2007; Gerber & Jackson 2015). Also, individual perceptions of the appropriateness of the regulation in place in each of the three regulatory sectors may matter. Citizens might see the regulation in place as insufficient, and the regulators insufficiently empowered to fulfil their oversight role. Measuring a conceptually complex social construction such as trust in isolation of these contextual factors may not likely result in substantial variations in outcomes. Focus groups, that will form the next phase in our research, may shed more light on the interpretation of our findings.

Third, the focus on the three regulatory domains of food safety, finance, and data protection limits our ability to generalize to all domains of regulation. The specificities of regulatory domains require us to extend our research efforts to cover other areas of regulation before we can make general statements about the effects of regulatory style on citizens' trust.

Fourth, in this study we depart from the assumption that the actions of the regulator will affect the trust citizens have in the regulator itself, as well as the regulatees. It is, however, likely that the perceptions citizens have of the regulatees in the sector impacts the trust they place in the regulator as well. The perceptions of the regulatees in the sector could potentially be much more influential for shaping the trust citizens place in the regulator, as citizens are likely more familiar with activities of the regulatees than of regulators. This could be one potential explanation as to why the results regarding the effects of enforcement style on citizens' trust in the regulator and regulatees are rather weak.

Fifth, some variation between countries and sectors could come from the presence of recent incidents related to one or more of the three sectors of concern, which could have strong influence on the perception of particular set of regulators or regulatees. This type of variation complicates the comparative analysis of the effects of enforcement style on citizens' trust in regulators and regulatees between sectors and countries.



### 4.2.3 Further steps

The rich dataset produced by these six experiments has not been fully exhausted by the present analysis. Our focus in this report has been placed on outlining the main effects of the experimental treatments, and the roles of the covariates. There is however room to explore the effects of enforcement in various subsamples of the dataset, on the basis of specific values of background characteristics of the participants, or their responses with regards to the covariates. In addition, our analysis so far has been conducted in each of the six national samples and three regulatory sectors separately, and the results compared between countries and sectors. Possibilities for analysing the data from the different countries and sectors into overarching, mixed-effects models should be explored, as they would provide opportunities for more direct comparison of the countries and the sectors. Such models could potentially help explain some patterns displayed by the data, for example the tendency to observe stronger effects of enforcement in countries with generally lower levels of trust.



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## Annex 1. Covariate analyses: generalized trust

Table A1.1. Analysis of covariance on trust in food safety regulator and regulatees including generalized trust covariate

	Regulator				Regulatees				
	Sum of squares	df	F value	p	Sum of squares	df	F value	p	
<b>Belgium</b>									
intercept	1288.93	1	742.15	< 0.01***	969.57	1	663.40	< 0.01***	
generalized trust	51.12	1	29.44	< 0.01***	84.42	1	57.76	< 0.01***	
formalism	3.23	1	1.86	0.17	12.48	1	8.54	< 0.01***	
coerciveness	1.04	1	0.60	0.44	0.18	1	0.12	0.72	
accommodation	0.60	1	0.35	0.56	0.39	1	0.27	0.61	
residuals	1417.18	816			1192.60	816			
<b>Germany</b>									
intercept	1673.43	1	867.95	< 0.01***	1013.55	1	449.82	< 0.01***	
generalized trust	30.73	1	15.94	< 0.01***	46.76	1	20.75	< 0.01***	
formalism	2.49	1	1.29	0.26	1.06	1	0.47	0.49	
coerciveness	19.76	1	10.25	< 0.01***	0.82	1	0.36	0.55	
accommodation	0.22	1	0.12	0.74	0.02	1	0.01	0.92	
residuals	1627.24	844			1901.73	844			
<b>Denmark</b>									
intercept	957.48	1	556.05	< 0.01***	683.23	1	340.30	< 0.01***	
generalized trust	70.83	1	41.13	< 0.01***	42.13	1	20.99	< 0.01***	
formalism	10.61	1	6.16	0.01**	4.94	1	2.46	0.12	
coerciveness	7.48	1	4.34	0.04**	7.38	1	3.68	0.06*	
accommodation	14.05	1	8.16	< 0.01***	0.69	1	0.34	0.56	
residuals	1434.35	833			1672.42	833			
<b>Israel</b>									
intercept	1100.41	1	527.95	< 0.01***	917.41	1	533.76	< 0.01***	
generalized trust	66.36	1	31.84	< 0.01***	38.34	1	22.31	< 0.01***	
formalism	13.88	1	6.66	0.01**	6.83	1	3.97	0.05**	
coerciveness	20.59	1	9.88	< 0.01***	10.47	1	6.09	0.01**	



accommodation	2.88	1	1.38	0.24	2.10	1	1.22	0.27
residuals	1817.52	872			1498.75	872		
Norway <sup>1</sup>								
intercept	1016.96	1	588.71	< 0.01***	748.83	1	574.39	< 0.01***
generalized trust	84.18	1	48.73	< 0.01***	109.22	1	83.78	< 0.01***
formalism	2.29	1	1.33	0.25	4.47	1	3.43	0.06*
coerciveness	2.17	1	1.25	0.26	0.48	1	0.36	0.55
accommodation	0.00	1	0.00	0.99	0.01	1	0.01	0.94
residuals	1497.69	867			1130.30	876		
Netherlands								
intercept	823.28	1	640.36	< 0.01***	607.82	1	444.19	< 0.01***
generalized trust	123.78	1	96.28	< 0.01***	112.01	1	81.85	< 0.01***
formalism	3.05	1	2.37	0.12	0.01	1	0.01	0.93
coerciveness	0.57	1	0.44	0.51	0.03	1	0.02	0.88
accommodation	0.63	1	0.49	0.48	4.28	1	3.12	0.08*
residuals	1095.38	852			1165.86	852		

Table A1.2. Analysis of covariance on trust in finance regulator and regulatees including generalized trust covariate

	Regulator				Regulatees			
	Sum of squares	df	F value	p	Sum of squares	df	F value	p
Belgium								
intercept	977.27	1	605.01	< 0.01***	530.10	1	300.23	< 0.01***
generalized trust	100.52	1	62.24	< 0.01***	173.35	1	98.18	< 0.01***
formalism	5.42	1	3.36	0.07*	0.53	1	0.30	0.58
coerciveness	0.06	1	0.04	0.85	0.13	1	0.07	0.79
accommodation	0.54	1	0.33	0.56	0.62	1	0.35	0.55
residuals	1319.69	817			1442.56	817		
Germany								
intercept	1326.72	1	642.35	< 0.01***	781.70	1	364.68	< 0.01***

<sup>1</sup> It should be noted that the assumption of homogeneity of regression slopes was violated in the ANCOVA model on the data in Norway for trust in the food safety sector regulator and regulatee. Further analysis indicated that the effects of generalized trust on the trust in the food safety regulator and regulatees was larger in the high accommodation group than in the low accommodation group. In addition, the effect of generalized trust on the trust in the food safety regulatees was larger in the lower coerciveness group than in the high coerciveness group.



generalized trust	37.57	1	18.19	< 0.01***	69.65	1	32.49	< 0.01***
formalism	1.94	1	0.94	0.33	2.99	1	1.39	0.24
coerciveness	6.20	1	3.00	0.08*	2.50	1	1.17	0.28
accommodation	0.00	1	0.00	0.98	1.59	1	0.74	0.39
residuals	1739.08	842			1804.82	842		
Denmark								
intercept	924.19	1	504.73	< 0.01***	505.09	1	249.83	< 0.01***
generalized trust	82.96	1	45.31	< 0.01***	63.78	1	31.55	< 0.01***
formalism	5.18	1	2.83	0.09*	4.76	1	2.35	0.13
coerciveness	23.92	1	13.06	< 0.01***	2.73	1	1.35	0.25
accommodation	2.95	1	1.61	0.20	4.02	1	1.99	0.16
residuals	1541.76	842			1702.29	842		
Israel								
intercept	971.42	1	524.65	< 0.01***	555.76	1	320.22	< 0.01***
generalized trust	91.05	1	49.17	< 0.01***	129.07	1	74.37	< 0.01***
formalism	0.63	1	0.34	0.56	3.22	1	1.85	0.17
coerciveness	2.87	1	1.55	0.21	1.56	1	0.90	0.34
accommodation	0.37	1	0.20	0.66	2.07	1	1.19	0.28
residuals	1571.97	849			1473.48	849		
Norway <sup>2</sup>								
intercept	989.50	1	735.36	< 0.01***	704.06	1	461.32	< 0.01***
generalized trust	134.02	1	99.60	< 0.01***	102.07	1	66.88	< 0.01***
formalism	3.16	1	2.35	0.13	1.45	1	0.95	0.33
coerciveness	6.31	1	4.69	0.03**	2.63	1	1.72	0.19
accommodation	5.63	1	4.18	0.04**	0.27	1	0.18	0.67
residuals	1145.10	851			1298.78	851		
Netherlands								
intercept	779.31	1	540.19	< 0.01***	484.56	1	282.31	< 0.01***
generalized trust	136.75	1	94.79	< 0.01***	148.30	1	86.40	< 0.01***
formalism	0.45	1	0.31	0.58	0.42	1	0.24	0.62

<sup>2</sup> The ANCOVA assumption of homogeneity of regression slopes was violated in the case of trust in the finance regulatees for the Norway sample. Further analysis indicated that the positive effect of generalized trust on trust in the finance regulatees was larger in the high formalism and high coerciveness groups than in the low ones.





coerciveness	5.67	1	3.93	0.05**	0.13	1	0.07	0.79
accommodation	4.76	1	3.30	0.07*	6.44	1	3.75	0.05*
residuals	1220.49	846			1452.08	846		

**Table A1.3. Analysis of covariance on trust in data protection regulator and regulatees including generalized trust covariate**

	Regulator				Regulatees			
	Sum of squares	df	F value	p	Sum of squares	df	F value	p
<b>Belgium</b>								
intercept	1202.82	1	782.45	< 0.01***	1016.12	1	751.13	< 0.01***
generalized trust	74.01	1	48.14	< 0.01***	120.82	1	89.31	< 0.01***
formalism	1.56	1	1.01	0.31	0.30	1	0.22	0.64
coerciveness	0.35	1	0.23	0.63	0.00	1	0.00	0.97
accommodation	0.28	1	0.18	0.67	0.03	1	0.02	0.88
residuals	1272.85	828			1120.11	828		
<b>Germany<sup>3</sup></b>								
intercept	1491.44	1	864.40	< 0.01***	965.35	1	579.02	< 0.01***
generalized trust	47.79	1	27.70	< 0.01***	98.96	1	59.36	< 0.01***
formalism	0.26	1	0.15	0.70	1.39	1	0.84	0.36
coerciveness	4.58	1	2.65	0.10	0.63	1	0.38	0.54
accommodation	18.22	1	10.56	< 0.01***	0.32	1	0.19	0.66
residuals	1444.17	837			1395.44	837		
<b>Denmark<sup>4</sup></b>								
intercept	841.41	1	507.89	< 0.01***	678.26	1	401.81	< 0.01***
generalized trust	130.95	1	79.04	< 0.01***	111.78	1	66.22	< 0.01***
formalism	5.76	1	3.48	0.06*	6.21	1	3.68	0.06*
coerciveness	10.00	1	6.04	0.01**	1.16	1	0.69	0.41
accommodation	1.12	1	0.68	0.41	0.01	1	0.00	0.96

<sup>3</sup> The assumption of homogeneity of regression slopes was violated in the analysis of trust in the data protection regulator in Germany. Further analysis indicated that the positive effect of generalized trust is stronger in the low coerciveness group than in the high coerciveness group.

<sup>4</sup> The homogeneity of regression slopes assumption was violated in the case of Denmark as well. Further analysis indicated that the positive effect of generalized trust on trust in the data protection regulator is stronger in the low coerciveness group than in the high coerciveness group. Furthermore, the positive effect of generalized trust on the trust in the data protection regulatees is stronger in the low coerciveness and high accommodation groups than in the high coerciveness and low accommodation groups.



residuals	1394.93	842			1421.28	842			
Israel									
intercept	1130.28	1	655.93	< 0.01***	987.35	1	568.08	< 0.01***	
generalized trust	95.17	1	55.23	< 0.01***	67.44	1	38.80	< 0.01***	
formalism	19.92	1	11.56	< 0.01***	7.60	1	4.37	0.04**	
coerciveness	0.90	1	0.52	0.47	0.28	1	0.16	0.69	
accommodation	8.68	1	5.04	0.03**	8.58	1	4.94	0.03**	
residuals	1499.16	870			1512.10	870			
Norway									
intercept	1312.89	1	973.32	< 0.01***	889.59	1	712.59	< 0.01***	
generalized trust	92.98	1	68.93	< 0.01***	154.95	1	124.12	< 0.01***	
formalism	1.64	1	1.22	0.27	0.01	1	0.01	0.93	
coerciveness	6.19	1	4.59	0.03**	0.20	1	0.16	0.69	
accommodation	0.11	1	0.08	0.78	0.97	1	0.78	0.38	
residuals	1174.88	871			1087.35	871			
Netherlands <sup>5</sup>									
intercept	860.22	1	722.77	< 0.01***	814.87	1	674.18	< 0.01***	
generalized trust	119.02	1	100.00	< 0.01***	110.27	1	91.23	< 0.01***	
formalism	11.90	1	10.00	< 0.01***	4.25	1	3.51	0.06*	
coerciveness	4.80	1	4.03	0.05**	1.48	1	1.23	0.27	
accommodation	4.01	1	3.37	0.07*	2.05	1	1.70	0.19	
residuals	1012.84	851			1028.60	851			

<sup>5</sup> We noted a violation of the homogeneity of regression slopes assumption in the case of the Netherlands as well. Further analysis indicated that the positive effect of generalized trust on trust in the data protection regulator is stronger in the high formalism group than in the low formalism group, and weaker in the high accommodation group than in the low accommodation group.



## Annex 2. Covariate analyses: role of government in the economy

Table A2.1. Analysis of covariance on trust in food safety regulator and regulatees including role of the government in the economy covariate

	Regulator				Regulatees			
	Sum of squares	df	F value	p	Sum of squares	df	F value	p
Belgium <sup>6</sup>								
intercept	583.30	1	346.89	< 0.01***	702.28	1	454.45	< 0.01***
role of government in the economy	91.42	1	54.37	< 0.01***	17.52	1	11.34	< 0.01***
formalism	2.71	1	1.61	0.20	11.26	1	7.28	< 0.01***
coerciveness	1.63	1	0.97	0.33	0.54	1	0.35	0.56
accommodation	0.02	1	0.01	0.92	0.19	1	0.12	0.73
residuals	1372.13	816			1261.00	816		
Germany								
intercept	1172.29	1	602.84	< 0.01***	1057.74	1	457.55	< 0.01***
role of government in the economy	17.58	1	9.04	< 0.01***	2.56	1	1.11	0.29
formalism	3.28	1	1.69	0.19	0.82	1	0.35	0.55
coerciveness	19.66	1	10.11	< 0.01***	0.71	1	0.31	0.58
accommodation	0.00	1	0.00	0.97	0.02	1	0.01	0.92
residuals	1635.40	841			1944.18	841		
Denmark <sup>7</sup>								
intercept	1154.88	1	656.30	< 0.01***	1042.50	1	507.13	< 0.01***
role of government in the economy	30.59	1	17.39	< 0.01***	0.05	1	0.03	0.87
formalism	10.55	1	5.99	0.01**	4.46	1	2.17	0.14
coerciveness	6.43	1	3.65	0.06*	5.44	1	2.65	0.10
accommodation	16.21	1	9.21	< 0.01***	0.53	1	0.26	0.61
residuals	1467.57	834			1714.44	834		

<sup>6</sup> We note a violation in the homogeneity of regression slopes assumption in the ANCOVA model for trust in the food safety regulator in the Belgium sample. Additional analysis of the data indicated that the positive effect of the preferences for more regulation of the economy on trust in the food safety regulator is stronger in the high formalism group than in the low formalism group.

<sup>7</sup> We note a violation of the homogeneity of regression slopes assumption in the case of trust in the Danish food safety regulator as well. Further analysis indicated that the positive effect of preferences for stronger regulation of the economy on trust in the regulator is stronger in the low accommodation and high coerciveness groups than in the high accommodation and low coerciveness groups.



Israel <sup>8</sup>									
intercept	1150.46	1	535.84	< 0.01***	991.65	1	562.99	< 0.01***	
role of government in the economy	3.20	1	1.49	0.22	0.01	1	0.01	0.94	
formalism	13.97	1	6.51	0.01**	6.82	1	3.87	0.05**	
coerciveness	22.96	1	10.69	< 0.01***	11.23	1	6.38	0.01**	
accommodation	2.22	1	1.04	0.31	2.73	1	1.55	0.21	
residuals	1865.76	869			1530.66	869			
Norway <sup>9</sup>									
intercept	1048.25	1	586.75	< 0.01***	983.14	1	693.51	< 0.01***	
role of government in the economy	22.08	1	12.36	< 0.01***	5.22	1	3.68	0.06*	
formalism	2.75	1	1.54	0.22	3.86	1	2.72	0.10*	
coerciveness	2.14	1	1.20	0.27	0.77	1	0.55	0.46	
accommodation	0.41	1	0.23	0.63	0.54	1	0.38	0.54	
residuals	1548.92	867				867			
Netherlands <sup>10</sup>									
intercept	848.63	1	635.50	< 0.01***	860.68	1	580.78	< 0.01***	
role of government in the economy	80.79	1	60.50	< 0.01***	14.62	1	9.86	< 0.01***	
formalism	1.41	1	1.06	0.30	0.26	1	0.17	0.68	
coerciveness	0.34	1	0.25	0.62	0.05	1	0.03	0.86	
accommodation	0.29	1	0.22	0.64	3.59	1	2.42	0.12	
residuals	1137.74	852			1262.62	852			

<sup>8</sup> The homogeneity of regression slopes assumption was violated in the case of trust in the Israeli food safety regulator as well. Here we found that the effect of preferences for government regulation was strongly positive in the low accommodation group, and slightly negative in the high accommodation group.

<sup>9</sup> The assumption of homogeneous regression slopes was violated in the model estimating trust in the food safety regulatees in Norway. Additional analysis indicated that the preferences for stronger regulation of the economy had a positive effect on trust in the regulatees in the high accommodation group, but not in the low accommodation group.

<sup>10</sup> We observe a violation in the assumption of homogeneous regression slopes in the case of trust in the food safety regulatees in the Netherlands as well. Here we see that the positive effect of preferences for strong government regulation of the economy is stronger in the low accommodation group than in the high one.



Table A2.2. Analysis of covariance on trust in finance regulator and regulatees including role of the government in the economy covariate

	Regulator				Regulatees			
	Sum of squares	df	F value	p	Sum of squares	df	F value	p
<b>Belgium</b>								
intercept	611.31	1	365.66	< 0.01***	559.38	1	284.00	< 0.01***
role of government in the economy	53.92	1	32.25	< 0.01***	12.03	1	6.11	0.02**
formalism	4.38	1	2.62	0.11	0.22	1	0.11	0.74
coerciveness	0.00	1	0.00	0.99	0.01	1	0.00	0.94
accommodation	0.25	1	0.15	0.70	0.07	1	0.03	0.86
residuals	1365.87	817			1609.18	817		
<b>Germany</b>								
intercept	866.86	1	421.83	< 0.01***	800.27	1	360.34	< 0.01***
role of government in the economy	38.05	1	18.52	< 0.01***	0.75	1	0.34	0.56
formalism	3.48	1	1.70	0.19	5.36	1	2.41	0.12
coerciveness	4.28	1	2.08	0.15	3.16	1	1.42	0.23
accommodation	0.00	1	0.00	0.98	1.84	1	0.83	0.36
residuals	1724.13	839			1863.29	839		
<b>Denmark</b>								
intercept	1192.64	1	629.02	< 0.01***	815.80	1	389.08	< 0.01***
role of government in the economy	21.00	1	11.08	< 0.01***	1.34	1	0.64	0.42
formalism	5.60	1	2.95	0.09*	4.99	1	2.38	0.12
coerciveness	22.83	1	12.04	< 0.01***	3.25	1	1.55	0.21
accommodation	2.32	1	1.23	0.27	3.20	1	1.53	0.22
residuals	1598.35	843			1767.54	843		
<b>Israel</b>								
intercept	1032.09	1	531.01	< 0.01***	778.93	1	412.42	< 0.01***
role of government in the economy	11.03	1	5.67	0.02**	3.28	1	1.73	0.19
formalism	1.19	1	0.61	0.43	2.47	1	1.31	0.25
coerciveness	2.77	1	1.43	0.23	1.87	1	0.99	0.32



accommodation	1.11	1	0.57	0.45	4.03	1	2.13	0.14
residuals	1646.27	847			1599.70	847		
Norway								
intercept	1113.93	1	762.00	< 0.01***	873.93	1	536.84	< 0.01***
role of government in the economy	32.17	1	22.00	< 0.01***	12.25	1	7.52	< 0.01***
formalism	4.16	1	2.85	0.09*	2.03	1	1.25	0.26
coerciveness	7.19	1	4.92	0.03**	3.17	1	1.95	0.16
accommodation	5.94	1	4.07	0.04**	0.60	1	0.37	0.54
residuals	1246.95	853				853		
Netherlands <sup>11</sup>								
intercept	719.39	1	492.35	< 0.01***	791.66	1	422.13	< 0.01***
role of government in the economy	126.34	1	86.46	< 0.01***	14.93	1	7.96	< 0.01***
formalism	0.06	1	0.04	0.84	1.82	1	0.97	0.33
coerciveness	4.62	1	3.16	0.08*	0.11	1	0.06	0.81
accommodation	8.43	1	5.77	0.02**	8.89	1	4.74	0.03**
residuals	1236.13	846				846		

**Table A2.3. Analysis of covariance on trust in data protection regulator and regulatees including role of the government in the economy covariate**

	Regulator				Regulatees			
	Sum of squares	df	F value	p	Sum of squares	df	F value	p
Belgium <sup>12</sup>								
intercept	641.26	1	417.35	< 0.01***	656.93	1	457.68	< 0.01***
role of government in the economy	71.18	1	46.33	< 0.01***	53.26	1	37.11	< 0.01***
formalism	2.43	1	1.58	0.21	0.06	1	0.04	0.83
coerciveness	0.41	1	0.27	0.61	0.00	1	0.00	0.98
accommodation	0.36	1	0.23	0.63	0.03	1	0.02	0.88

<sup>11</sup> We observe a violation of the homogeneity of regression slopes assumption in the case of citizen trust in the finance regulator in the Netherlands. Additional analysis indicates that the positive effect of preferences for stronger regulation of the economy is stronger in the low accommodation group than in the high accommodation one.

<sup>12</sup> A violation of the homogeneity of regression slopes in the trust in the data protection regulator model prompts additional analysis. We thus find that the positive effect of preferences for stronger regulation on trust in the data protection regulator is stronger in the high coerciveness group than in the low coerciveness one.



residuals	1270.68	827			1187.04	827			
Germany <sup>13</sup>									
intercept	1150.72	1	660.98	< 0.01***	1052.88	1	594.32	< 0.01***	
role of government in the economy	23.04	1	13.23	< 0.01***	1.77	1	1.00	0.32	
formalism	0.02	1	0.01	0.91	0.92	1	0.52	0.47	
coerciveness	4.66	1	2.68	0.10	0.35	1	0.20	0.66	
accommodation	16.60	1	9.54	< 0.01***	0.17	1	0.09	0.76	
residuals	1451.93	834			1477.49	834			
Denmark									
intercept	1078.76	1	614.87	< 0.01***	975.16	1	545.47	< 0.01***	
role of government in the economy	42.12	1	24.01	< 0.01***	14.91	1	8.34	< 0.01***	
formalism	4.34	1	2.48	0.12	5.18	1	2.90	0.09*	
coerciveness	7.58	1	4.32	0.04**	0.12	1	0.07	0.80	
accommodation	0.67	1	0.38	0.54	0.01	1	0.01	0.93	
residuals	1477.25	842			1505.29	842			
Israel									
intercept	1243.53	1	690.57	< 0.01***	1206.78	1	666.07	< 0.01***	
role of government in the economy	18.44	1	10.24	< 0.01***	1.05	1	0.58	0.45	
formalism	27.74	1	15.40	< 0.01***	10.13	1	5.59	0.02**	
coerciveness	1.09	1	0.60	0.44	0.36	1	0.20	0.65	
accommodation	7.69	1	4.27	0.04**	8.45	1	4.66	0.03**	
residuals	1564.84	869			1574.45	869			
Norway <sup>14</sup>									
intercept	1119.13	1	808.80	< 0.01***	1079.48	1	766.64	< 0.01***	
role of government in the economy	55.09	1	39.81	< 0.01***	15.69	1	11.14	< 0.01***	
formalism	0.63	1	0.45	0.50	0.14	1	0.10	0.75	

<sup>13</sup> We observe a violation in the assumption of homogeneity of regression slopes in the case of trust in the data protection regulator in Germany as well. Additional analysis indicated that the positive effect of preferences for stronger regulation on trust in the regulator is stronger in the high formalism group than in the low one.

<sup>14</sup> We observe violation in the homogeneity in regression slopes assumption in the case of trust in the data protection regulator in the Norway sample. Further analysis indicated that the positive effect of the covariate is stronger in the low accommodation group than in the high one.



coerciveness	6.68	1	4.83	0.02**	0.26	1	0.19	0.67
accommodation	0.03	1	0.02	0.88	0.80	1	0.57	0.45
residuals	1205.20	871			1226.43	871		
Netherlands								
intercept	730.55	1	611.20	< 0.01***	834.09	1	654.79	< 0.01***
role of government in the economy	114.36	1	95.68	< 0.01***	54.81	1	43.03	< 0.01***
formalism	8.83	1	7.39	< 0.01***	2.63	1	2.07	0.15
coerciveness	5.09	1	4.26	0.04**	1.54	1	1.21	0.27
accommodation	2.24	1	1.87	0.17	1.01	1	0.79	0.37
residuals	1015.98	850			1082.75	850		





### Annex 3. Covariate analyses: knowledge of the work of the regulator

Table A3.1. Analysis of covariance on trust in food safety regulator and regulatees including knowledge of the work of the regulator covariate

	Regulator				Regulatees			
	Sum of squares	df	F value	p	Sum of squares	df	F value	p
<b>Belgium</b>								
intercept	2104.03	1	1203.22	< 0.01***	1775.07	1	1162.39	< 0.01***
knowledge	35.33	1	20.20	< 0.01***	35.78	1	23.43	< 0.01***
formalism	2.20	1	1.26	0.26	11.24	1	7.36	< 0.01***
coerciveness	2.82	1	1.61	0.20	1.32	1	0.87	0.35
accommodation	0.22	1	0.13	0.72	0.12	1	0.08	0.78
residuals	1419.91	812			1239.99	812		
<b>Germany</b>								
intercept	2582.64	1	1345.75	< 0.01***	1644.38	1	730.32	< 0.01***
knowledge	38.25	1	19.93	< 0.01***	48.16	1	21.39	< 0.01***
formalism	3.90	1	2.03	0.15	0.33	1	0.14	0.70
coerciveness	20.77	1	10.82	< 0.01***	1.05	1	0.47	0.50
accommodation	0.07	1	0.04	0.85	0.01	1	0.00	0.94
residuals	1619.72	844			1900.33	844		
<b>Denmark<sup>15</sup></b>								
intercept	1804.71	1	1014.50	< 0.01***	1237.89	1	607.47	< 0.01***
knowledge	35.03	1	19.69	< 0.01***	25.52	1	12.52	< 0.01***
formalism	9.21	1	5.18	0.02**	4.25	1	2.09	0.15
coerciveness	5.98	1	3.36	0.07*	5.82	1	2.86	0.09*
accommodation	18.72	1	10.52	< 0.01***	0.14	1	0.07	0.79
residuals	1488.95	837			1705.61	837		
<b>Israel<sup>16</sup></b>								

<sup>15</sup> We observe violations of the assumptions of homogeneity of regression slopes in the case of trust in the food safety regulator and regulatees in Denmark. Further analysis indicates that the positive effect of knowledge of the work of the regulator on trust in the regulator is stronger in the low formalism group than in the high formalism group. In addition, the positive effect of knowledge of the work of the regulator on trust in the regulatees is stronger in the high accommodation group than in the low accommodation group.

<sup>16</sup> The homogeneity of regression slopes assumption was violated in the model estimating trust in the food safety regulator in Israel. Additional analysis showed that the effect of knowledge on the trust in the regulator is weakly positive in the high formalism group,



intercept	2882.83	1	1350.66	< 0.01***	2233.72	1	1284.69	< 0.01***
knowledge	8.03	1	3.76	0.05*	10.44	1	6.00	0.01**
formalism	12.19	1	5.71	0.02**	5.85	1	3.36	0.07*
coerciveness	20.84	1	9.76	< 0.01***	10.45	1	6.01	0.01**
accommodation	2.13	1	1.00	0.32	2.57	1	1.48	0.22
residuals	1844.11	864			1502.25	864		
Norway <sup>17</sup>								
intercept	1481.51	1	852.59	< 0.01***	1337.31	1	965.54	< 0.01***
knowledge	74.33	1	42.78	< 0.01***	37.25	1	26.89	< 0.01***
formalism	1.66	1	0.96	0.33	4.95	1	3.57	0.06*
coerciveness	2.09	1	1.20	0.27	0.52	1	0.38	0.54
accommodation	0.16	1	0.09	0.77	0.27	1	0.19	0.66
residuals	1506.55	867				867		
Netherlands								
intercept	2121.50	1	1545.00	< 0.01***	1645.71	1	1126.34	< 0.01***
knowledge	41.47	1	30.20	< 0.01***	33.28	1	22.78	< 0.01***
formalism	3.47	1	2.53	0.11	0.00	1	0.00	0.97
coerciveness	0.83	1	0.61	0.44	0.10	1	0.07	0.79
accommodation	0.26	1	0.19	0.66	2.93	1	2.00	0.16
residuals	1167.17	850			1241.95	850		

**Table A3.2. Analysis of covariance on trust in finance regulator and regulatees including knowledge of the work of the regulator covariate**

	Regulator				Regulatees			
	Sum of squares	df	F value	p	Sum of squares	df	F value	p
Belgium <sup>18</sup>								
intercept	2452.93	1	1460.06	< 0.01***	1596.18	1	845.62	< 0.01***

and moderately negative in the low formalism group. In addition, the positive effect of knowledge on trust in the regulator is stronger in the low coerciveness group than in the high coerciveness group.

<sup>17</sup> We observe a violation in the assumption of homogeneity of regression slopes in the model estimating trust in the food safety regulator in the case of Norway as well. Here we observe that the positive effect of knowledge on trust is stronger in the high accommodation group than in the low accommodation group.

<sup>18</sup> We observe a violation of the homogeneity of regression slopes assumption in the ANCOVA model on the trust in the finance regulator in Belgium. Additional analysis indicates that the positive effect of the knowledge covariate is present only in the high coerciveness group, and not in the low coerciveness group. In addition, the positive effect of this covariate is also stronger in the low formalism group than in the high formalism group.



knowledge	36.63	1	21.80	< 0.01***	78.51	1	41.59	< 0.01***
formalism	4.37	1	2.60	0.11	0.07	1	0.04	0.84
coerciveness	0.01	1	0.01	0.94	0.19	1	0.10	0.75
accommodation	0.10	1	0.06	0.81	0.14	1	0.07	0.79
residuals	1365.85	813			1534.62	813		
Germany								
intercept	2555.88	1	1235.62	< 0.01***	1674.64	1	772.78	< 0.01***
knowledge	27.09	1	13.10	< 0.01***	44.80	1	20.67	< 0.01***
formalism	2.40	1	1.16	0.28	3.56	1	1.64	0.20
coerciveness	6.69	1	3.23	0.07*	1.92	1	0.89	0.35
accommodation	0.00	1	0.00	0.98	1.63	1	0.75	0.39
residuals	1737.53	840			1820.30	840		
Denmark								
intercept	2546.41	1	1338.40	< 0.01***	1359.87	1	665.67	< 0.01***
knowledge	27.60	1	14.51	< 0.01***	51.57	1	25.25	< 0.01***
formalism	6.28	1	3.30	0.07*	6.27	1	3.07	0.08*
coerciveness	25.05	1	13.17	< 0.01***	4.22	1	2.07	0.15
accommodation	2.30	1	1.21	0.27	2.91	1	1.42	0.23
residuals	1613.39	848			1732.34	848		
Israel								
intercept	2569.08	1	1345.04	< 0.01***	1868.09	1	999.35	< 0.01***
knowledge	37.20	1	19.48	< 0.01***	18.27	1	9.77	< 0.01***
formalism	1.13	1	0.59	0.44	2.44	1	1.30	0.25
coerciveness	2.41	1	1.26	0.26	1.74	1	0.93	0.33
accommodation	0.84	1	0.44	0.51	3.63	1	1.94	0.16
residuals	1612.07	844			1577.69	844		
Norway								
intercept	2451.81	1	1703.02	< 0.01***	1832.97	1	1138.70	< 0.01***
knowledge	50.96	1	35.40	< 0.01***	26.21	1	16.28	< 0.01***
formalism	4.50	1	3.12	0.08*	2.29	1	1.43	0.23
coerciveness	7.19	1	5.00	0.03**	2.99	1	1.86	0.17
accommodation	5.71	1	3.97	0.05**	0.42	1	0.26	0.61



residuals	1229.49	854			1374.68	854		
Netherlands								
intercept	2755.00	1	1746.37	< 0.01***	1767.91	1	980.70	< 0.01***
knowledge	27.06	1	17.15	< 0.01***	75.33	1	41.79	< 0.01***
formalism	0.00	1	0.00	0.96	1.55	1	0.86	0.35
coerciveness	7.09	1	4.50	0.03*	0.30	1	0.17	0.68
accommodation	4.57	1	2.90	0.09*	6.58	1	3.65	0.06*
residuals	1334.61	846			1525.08	846		

**Table A3.3. Analysis of covariance on trust in data protection regulator and regulatees including knowledge of the work of the regulator covariate**

	Regulator				Regulatees			
	Sum of squares	df	F value	p	Sum of squares	df	F value	p
Belgium								
intercept	2711.04	1	1718.10	< 0.01***	2564.02	1	1765.30	< 0.01***
knowledge	25.28	1	16.02	< 0.01***	27.38	1	18.85	< 0.01***
formalism	2.94	1	1.86	0.17	0.01	1	0.00	0.95
coerciveness	0.16	1	0.10	0.75	0.02	1	0.01	0.92
accommodation	0.52	1	0.33	0.57	0.03	1	0.02	0.89
residuals	1292.32	819			1189.56	819		
Germany								
intercept	2604.86	1	1521.23	< 0.01***	1964.12	1	1148.99	< 0.01***
knowledge	47.42	1	27.69	< 0.01***	52.95	1	30.97	< 0.01***
formalism	0.36	1	0.21	0.65	1.48	1	0.86	0.35
coerciveness	4.95	1	2.89	0.09*	0.36	1	0.21	0.65
accommodation	16.19	1	9.46	< 0.01***	0.09	1	0.05	0.82
residuals	1431.52	836			1429.08	836		
Denmark								
intercept	2640.01	1	1455.15	< 0.01***	2144.31	1	1173.79	< 0.01***
knowledge	6.73	1	3.71	0.05*	6.94	1	3.80	0.05*
formalism	5.48	1	3.02	0.08*	6.99	1	3.82	0.05*
coerciveness	6.05	1	3.33	0.07*	0.12	1	0.06	0.80



accommodation	1.22	1	0.67	0.41	0.03	1	0.02	0.90
residuals	1531.23	844			1541.84	844		
Israel								
intercept	3280.34	1	1835.34	< 0.01***	2852.20	1	1578.45	< 0.01***
knowledge	25.08	1	14.03	< 0.01***	6.98	1	3.86	0.05**
formalism	27.88	1	15.60	< 0.01***	10.11	1	5.59	0.02**
coerciveness	0.96	1	0.54	0.46	0.42	1	0.23	0.63
accommodation	8.73	1	4.89	0.03**	8.99	1	4.97	0.03**
residuals	1544.25	864			1561.22	864		
Norway								
intercept	2215.75	1	1591.09	< 0.01***	2064.71	1	1462.73	< 0.01***
knowledge	53.29	1	38.26	< 0.01***	11.06	1	7.84	< 0.01***
formalism	0.91	1	0.66	0.42	0.17	1	0.12	0.73
coerciveness	4.29	1	3.08	0.08*	0.22	1	0.16	0.69
accommodation	0.01	1	0.01	0.94	0.80	1	0.57	0.45
residuals	1211.56	870			1228.04	870		
Netherlands <sup>19</sup>								
intercept	2258.70	1	1746.56	< 0.01***	2095.42	1	1614.04	< 0.01***
knowledge	30.16	1	23.32	< 0.01***	33.56	1	25.85	< 0.01***
formalism	9.07	1	7.02	< 0.01***	2.63	1	2.03	0.15
coerciveness	5.11	1	3.95	0.05**	1.68	1	1.29	0.26
accommodation	2.97	1	2.30	0.13	1.33	1	1.03	0.31
residuals	1099.24	850			1103.51	850		

<sup>19</sup> We note a violation of the assumption of homogeneity of regression slopes in the model estimating trust in the data protection regulator in the Netherlands. Further analysis indicates that the positive effect of knowledge of the work of the regulator on trust in the regulator is stronger in the high coerciveness, than in the low coerciveness group.

