Open government and public trust: a new revaluation of the citizen perspective

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5. A survey study on the relationship between openness and trust

THIS section aims to quantitatively answer the first research question: *Does openness affect the level of public trust?* The dependent variable, public trust, consists of perceived competence, integrity, and benevolence. The dimensions of institutional openness are proactive transparency, responsive transparency, data insight, and participation. To examine this relationship, original survey data are used from two surveys, one among 2928 Dutch home owners and the other among 350 Dutch municipalities. The structure of this chapter is as follows: After displaying the main descriptives and the correlations in 5.1, the relationship between *institutional* openness and public trust is examined in section 5.2, as well as the association between *perceived* openness and trust. Section 5.3 delineates several auxiliary findings. The chapter concludes with a reflection on the survey results in 5.4.

5.1 Descriptive statistics and correlations

5.1.1 Descriptives

The dependent variable is public trust, which is measured as perceived competence (3 items), benevolence (3 items), and integrity (3 items). A principal component analysis shows one clear component is distinguished, implying that together these nine items reliably measure the same thing: public trust. Additionally, the Cronbach's alpha coefficient for the nine items is .955 (n = 2911), revealing that the items have a high internal consistency, and thus that the respondents tend to score consistently on all nine items. From this, it can be concluded that the nine items indeed form a valid trust-scale, with higher scores implicating a higher trust level. This allows for computing one trust score that is used for further analysis. The effect of openness on the three separate dimensions 'competence', 'benevolence', and 'integrity' is nevertheless examined as well to not miss any potentially interesting correlations. The full principal component analysis is included in appendix 5.1. Tables 5.1 shows the mean scores.

Table 5.1 Descriptives public trust (N=2928)

	mean	S.D.
PUBLIC TRUST	2.63	.85
Competence	2.59	.93
Benevolence	2.58	.85
Integrity	2.67	.91

In addition to the socio-demographic traits age, education, and income (section 4.2.3.2), occupational background and political preference are included in the analysis. Table 5.2 displays their descriptives.

Table 5.2 The sample: occupation and political preference

	n	percentage (of all respondents)
Occupation		
Municipal civil servant	134	4.6%
Other civil servant	238	8.1%
Occupation outside of government (not a civil servant)	2529	86.4%
Political preference		
VVD (right wing, incumbent)	712	24.3%
D66 (centre, incumbent)	314	10.7%
CDA (centre, incumbent)	258	8.8%
ChristenUnie (left wing, incumbent)	117	4%
PvdA (left wing)	247	8.4%
Groenlinks (left wing)	225	7.7%
50PLUS (left wing)	78	2.7%
Partij voor de Dieren (left wing)	118	4%
SP (far left)	126	4.3%
SGP (right wing)	54	1.8%
PVV (far right)	95	3.2%
Forum voor Democratie (far right)	75	2.6%
Other party (various smaller parties)	81	2.8%
I do not remember	94	3.2%
I did not vote	86	2.9%
I'd rather not say	233	8%

In 2021, the Netherlands consisted of 352 municipalities. Two municipalities did not provide a complete dataset on their implemented openness measures in the tax domain (hereafter: institutional openness). Therefore, this study includes the institutional openness of 350 municipalities in this empirical domain in 2021. The response is this high because the questionnaire was made a part of a regular inventory questionnaire by the national oversight agency. Each municipality has the freedom to implement openness in the way they see fit. Table 5.3 shows this results in great variation between municipalities. A complete analysis of the institutional openness scores is included in appendix 5.2.

Table 5.3 Descriptives institutional openness: all municipalities (N=350)

	mean	S.D.	minimum	maximum
Institutional openness (scale 0-24)	11.54	2.75	3.75	17.25
Proactive transparency (scale 0-6)	2.34	1.27	0	5
Responsive transparency (scale 0-6)	3.54	.66	1.75	5.25
Data insight (scale 0-6)	2.76	1.14	.50	5.50
Participation possibilities (scale 0-6)	2.89	.92	.50	5

Besides the main relationship between openness and trust, several other citizen perceptions are included in the survey, such as the respondents' knowledge of real estate assessment, their affinity with the topic, as well as their perceptions of government in general, municipal performance, and openness. Table 5.4 gives an overview of these perceptions.

Table 5.4 Discriptives: other citizen perceptions

	n	percentage
Knowledge (self-reported)		
Very low	189	6.5%
Low	621	21.2%
Neither high or low	578	19.7%
High	1241	42.4%
Very high	265	9.1%

	n	percentage
Affinity		
Very low	18	0.6%
Low	87	3%
Neither high or low	243	8.3%
High	1625	5.5%
Very high	923	31.5%
General disposition towards government		
Very untrustworthy	180	6.1%
Untrustworthy	603	20.6%
Neutral	1121	38.3%
Trustworthy	967	33%
Very trustworthy	48	1.6%
Perceived performance		
Very bad	387	13.2%
Bad	716	24.5%
Neither good or bad	1168	39.9%
Good	568	19.4%
Very good	37	1.3%
Perceived transparency		
Very low	407	19.9%
Low	892	30.5%
Neither high or low	1001	34.2%
High	502	17.1%
Very high	84	2.9%
Perceived data insight		
Very low	393	13.4%
Low	840	28.7%
Neither high or low	873	29.8%
High	684	23.4%
Very high	92	3.1%
Perceived participation		
Very low	217	7.4%
Low	471	16.1%
Neither high or low	903	30.8%
High	1090	37.2%
Very high	195	6.7%

5.1.2 Are openness and public trust correlated?

After reviewing the descriptives, let's turn to the relationship between openness and trust. Is more openness a way to promote public trust? A correlation analysis (table 5.5) reveals that municipal openness efforts (2 and 2a to 2d) are very weakly related to public trust. The table also shows that not all components of openness (2a to d) are strongly related. Municipalities do not implement all components in conjunction with each other but can make choices for one over the other.

Table 5.5 Openness and trust: correlation coefficients (Pearson, N=2928)

	1	1a	1b	1c	2.	2a	2b	2c	2d
1. PUBLIC TRUST	1								
Perceived competence (1a)	.95**	1							
Perceived benevolence (1b)	.90**	.78**	1						
Perceived integrity (1c)	.96**	.88**	.83**	1					
2. Overall openness score (2a-d)	.05**	.05**	.04	.05**	1				
Proactive transparency score (2a)	.04*	.04	.03	.04*	.79**	1			
Responsive transparency score (2b)	.05**	.05*	.04	.05**	.78**	.61**	1		
Data insight score (2c)	.03	.04*	.02	.03	.79**	.38**	.39**	1	
Participation score (2d)	.05**	.05*	.04*	.05**	.90**	.52**	.62**	.77**	1

* $p < .05$ ** $p < .01$

NB. 1. consists of 1a, 1b, 1c, and 2. consist of 2a, 2b, 2c, 2d, resulting in strong correlations.

Interestingly, the level of responsive transparency (2b) is not correlated to the level of perceived benevolence (1b). Responsiveness (the quality of being open to questions and reacting quickly) and benevolence (willingness to help) were expected to be positively related, since the openness of the contact offers an opportunity to display municipal benevolence. However, no correlation is found, and apparently perceived benevolence is formed in other ways.

In contrast to institutional openness, citizens' perceived openness of government does show a strong and significant correlation to public trust. Other perceptions, such as perceived performance, correlate strongly with trust as well. Table 5.6 shows the correlations between the different citizen perceptions. What stands out from these tables is the difference between institutional openness (low correlation to trust) and openness perceptions (high correlation to trust). The combination of institutional openness elements (overall openness score) does not have any accumulative effect on public trust either, as it shows the same low correlation as the four separate elements. Hereafter, the four elements of openness are shown separately in the analyses.

Table 5.6 Perceptions and trust: correlation coefficients (Spearman)

	1	2	3	4	5	6
1. Public trust	1					
2. Perceived openness	.73**	1				
3. Perceived performance	.85**	.69**	1			
4. General disposition towards government	.57**	.46**	.49**	1		
5. Knowledge	.16**	.36**	.18**	.14**	1	
6. Affinity	-.22**	-.15**	-.22**	-.07**	.02	1

** $p < .001$

Finally, knowledge and affinity are included as well. After all, when low trust results from little knowledge of the subject matter, transparency could be a tool to enhance trust by informing the public. As was done in

previous studies (Grimmelikhuijsen, 2012), the survey included an item on how much knowledge the citizen indicated he has of real estate assessment, as well as an item on its affinity with the topic. The respondents (self-reported) knowledge is weakly correlated with trust, $rs(2894) = .16$, $p < .001$. Trust slightly increases with increased knowledge, although only very weakly. Interestingly, knowledge is not associated with affinity with the topic. High affinity with the topic does not automatically imply high knowledge about it. Moreover, high affinity is weakly negatively related to public trust. It is the first result that shows a negative correlation to trust, $rs(2896) = -.22$, $p < .001$. When respondents' interest in real estate assessment increases, their trust slightly decreases. Knowledge of and affinity with real estate assessment are, however, not associated with trust as strongly as some of the other perceptions, such as perceived performance, perceived openness, and trust in government in general, or, as becomes clear in section 5.3, as strong as the effect of satisfaction with encounters.

5.2 Is openness an adequate trust predictor?

THIS section first examines the effect of institutional openness on public trust and secondly, the relationship between perceived openness and public trust. A short preliminary note on the statistical methods. As part of the regression analyses the assumptions are checked, such as linearity, homoscedasticity, and multicollinearity. For readability purposes, *perceptions* are included as scale variables whereas a Likert-scale can also be considered ordinal. This provides a clearer and more meaningful result than the dummy analyses, which yield the same result, but are more difficult to interpret because of the varying reference categories.

5.2.1 Does institutional openness affect public trust?

Although the correlations between institutional openness and trust are small, a hierarchical multiple regression analysis examines how the concepts relate to each other and to check the robustness of the results by adding control variables (table 5.7). Model I solely includes the four dimensions of institutional openness. Model II adds the control variables,

such as age, education, income, occupation type, and political preference. Finally, model III adds the respondents' knowledge of real estate assessment and their affinity with the topic, as well as whether a public encounter has taken place and in what way.

First, the public trust score is checked for normal distribution. The scores are slightly negatively skewed. A Shapiro-Wilk test showed a significant departure from normality, $W(2928) = 0.98$, $p < .001$. Yet, the Shapiro-Wilk test is sensitive for large datasets and often reports small deviations from normality as significant (Field, 2018). Therefore, additionally, a visual inspection of the histogram of the trust score is used, revealing an approximately normal distribution.

Table 5.7 Hierarchical multiple regression: determinants of public trust (N=2416)

	Model I			Model II			Model III		
	β	(s.e.)	t	β	(s.e.)	T	β	(s.e.)	T
Explanatory variables									
Institutional openness									
Proactive transparency	.02	(.02)	.67	.02	(.02)	.62	.00	(.01)	.15
Responsive transparency	.01	(.03)	.24	.00	(.03)	.07	.01	(.02)	.30
Data insight	.01	(.02)	.45	.02	(.02)	.56	.02	(.02)	.71
Participation	.02	(.03)	.52	.03	(.02)	.71	.02	(.02)	.51
Control variables									
Age[A]									
18-45 years				.03	(.05)	1.36	.05	(.04)	2.39*
65+ years				.07	(.04)	2.98**	.07	(.04)	3.58***
Education[B]									
lower				.03	(.09)	1.39	.04	(.08)	2.09*
middle				.01	(.04)	.51	.01	(.04)	.50
Income[C]									
< €20.000				-.05	(.12)	-2.46*	-.05	(.11)	-2.58**
€21.000-30.000				.00	(.07)	-.07	.00	(.06)	-.24
€31.000-40.000				-.02	(.05)	-.78	-.01	(.05)	-.72
€41.000-50.000				-.03	(.05)	-1.56	-.03	(.04)	-1.52
> €100.000				.02	(.05)	1.05	.02	(.05)	.87
Occupation[D]									
Municipal official				.13	(.08)	6.77***	.12	(.07)	6.69***
Other civil servant				.02	(.06)	1.09	.02	(.06)	1.21
Political preference[E]									
D66				.06	(.06)	2.47*	.05	(.05)	2.26
CDA				.04	(.06)	1.82	.03	(.06)	1.59
ChristenUnie				.04	(.09)	1.92	.03	(.08)	1.74*
PvdA				.05	(.07)	2.28*	.03	(.06)	1.53
GroenLinks				.02	(.07)	.81	.02	(.06)	.92
50PLUS				-.03	(.11)	-1.63	-.03	(.10)	-1.70
Partij voor de Dieren				-.04	(.09)	-1.96*	-.04	(.08)	-2.03

	Model I			Model II			Model III		
	β	(s.e.)	t	β	(s.e.)	T	β	(s.e.)	T
SP				-.08	(.09)	-3.75***	-.06	(.08)	-2.92**
SGP				.01	(.13)	.36	.02	(.12)	.81
PVV				-.12	(.10)	-5.63***	-.09	(.09)	-4.88***
FVD				-.04	(.11)	-1.85	-.03	(.10)	-1.44
Other party				-.09	(.10)	-4.50***	-.07	(.10)	-4.04***
I do not remember				-.04	(.10)	-2.17*	-.05	(.09)	-2.69**
I did not vote				-.07	(.11)	-3.46***	-.06	(.10)	-3.30***
I'd rather not say				-.14	(.08)	-6.85***	-.11	(.07)	-5.62***
Knowledge							.17	(.01)	9.22***
Affinity							-.13	(.02)	-7.27***
Type of public encounter[F]									
Asked a question							-.13	(.07)	-7.39***
Oral procedure							-.09	(.09)	-5.26***
Written procedure							-.24	(.05)	-13.48***
Several of the above							-.20	(.06)	-10.81***
Procedure via legal intermediary							-.13	(.13)	-7.16***
	B	(s.e.)	t	B	(s.e.)	t	B	(s.e.)	T
Constant	2.56	(.08)	33.97	2.54	(.09)	29.61	2.92	(.13)	22.69
R^2	.002			.100***			.253***		

[A] Age group 45-65 years (middle) is the reference category; [B] High education is the reference category; [c] Income group €51.000-100.000 is the reference category; [D] Non-civil servants are the reference category; [E] Largest incumbent party (VVD) is the reference category. [F] Silent majority is reference category (the group of citizens who did not engage in any type of public encounter).
*p < .05 **p < .01 ***p < .001

No effect of the level of municipal openness on public trust is found (model I). Neither the four separate openness elements nor the total open government score (the sum of the four) appear to affect the level of public trust. Controlling for age, education, income, occupation, and political preference does not affect that result (model II). *Institutional openness does not affect the level of public trust*. This result does not match the assumptions based on the literature. No evidence in support of any of the hypotheses on the positive relationship between open government and public trust is found, neither in the case of the separate four open government elements nor for their combination. Yet, transparency and data insight do not reveal a negative effect on public trust (see table 3.3 for an overview of the hypotheses).

Even though the main relation under investigation is openness and trust, as a little side step, it is examined whether trust itself differs per age, level of education, or income. The data reveal no straightforward relation

between age and trust. The eldest citizens are slightly more trusting than the middle group, although the younger citizens do not show any significant differences with the other groups. The full ANOVA results can be found in appendix 5.3. The data do not provide any evidence for the premise that higher educated citizens are more trusting, nor for the opposite premise of lower educated citizens being more trusting. Is it all about the money then? The two highest income groups have more trust than the lowest income group, yet no difference is found for the middle income groups. Trust does not gradually increase or decrease when income increases.

Municipal civil servants have higher trust than home owners who do not work for the government. Municipal employees also have higher trust than other government officials, who are likely to be bureaucracy-savvy as well. This result may be explained by the servingbias of the municipal servants, who are more positive towards the organisation type they themselves work for. Non-civil servants find their way to the municipality just as well. It could also be that they are more familiar with and have more insight into the workings of local government, which makes them more trusting of it.

No clear pattern emerges for political preference; both left and right-wing voters can have low or high trust. Striking are the low trust levels among the respondents that do not remember which party they voted for, respondents that voted for one of the other smaller parties, non-voters, and the group that is unwilling to disclose its voting behaviour. These groups often have significantly less trust than the voters of the incumbent parties. The non-voters reveal lower trust levels than almost all political parties. This suggests that at least a portion of the citizens consciously refrain from going to the ballot box out of distrust, while others choose to vote for the opposition as a clear 'anti-incumbent vote'. There is a weak positive effect of knowledge on trust. More knowledge on the topic is associated with slightly more trust, whereas affinity reveals a weak negative effect. This suggests that minimising the (very) low knowledge groups could enhance trust.

The question of whether the degree of openness leads to more public trust could partly depend on the predisposition that some citizens are more

proactive than others. Therefore, whether the respondent proactively encountered the government is included in model III. A public encounter can vary from asking a question to starting a legal procedure. If openness should show an effect anywhere, it is among this group of proactive citizens that are able to speak from recent concrete experience with government. Participation in an open municipality was hypothesised to positively affect public perceptions. Yet, in this dataset, this is not observed. A separate extra analysis of participants did not yield any other results. Among this group, trust appears not to result from institutional openness. The full regression table on the effect of institutional openness on the trust of participants is included in appendix 5.5. Even among this group that is most likely to be affected by openness, no connection between openness and trust is found. An ANOVA shows that participants actually have less trust than the 'silent majority' (appendix 3.3). This does not confirm the hypothesis that citizens who participate have higher trust levels than non-participants.

A possible explanation for the absence of an effect could be the specific 'population of homeowners'. In addition to survey data on home owners, data on renters is collected as well (n=177). A t-test reveals no significant difference between the trust levels of renters (M = 2.63, SD = .86) and home owners (M = 2.63, SD = .85), conditions: t(3104)= .32, p = .97. The regression analysis among renters (full table in appendix 5.4) reveals a similar result on the effect of institutional openness on public trust. The lack of effect of institutional openness on trust in the present study can be interpreted in two ways. A pessimist may argue that the efforts are fruitless when it comes to promoting trust, and a minimum level of openness may as well be pursued, whereas an optimist could argue that the absence of an effect justifies the variety of implementations in practice. A closer look at the 350 Dutch municipalities reveals that most of them have a unique openness profile. The absence of one preferred profile over the other justifies their individual choice, which can then be made on the basis of other arguments, such as organisational culture, public values, or even local traditions. Then again, the variety of openness measures citizens encounter, may cause them to be unclear. A lack of clarity or unfamiliarity with such measures may dampen their effect on public trust.

5.2.2 Does perceived openness affect public trust?

After having examined the relationship between municipal openness, let's take a closer look at citizens' perceptions of openness. The correlation matrix already indicated that a very different story emerges when analysing citizens' perceptions of openness. The respondents were asked how transparent they find the municipality (perceived transparency: in citizens' perceptions, no distinction was made between proactive and responsive transparency), how clear they feel the municipality is about the data that is used to determine the WOZ-value (perceived data insight), and how easily they feel they can raise any objections with the municipality (perceived participation possibilities).

A principal component analysis (PCA) confirms that these items form one scale for perceived openness, with only one component with an Eigenvalue higher than one (EV = 2.057), which accounts for 68,58% of the total variance, and with factor loadings from .851, .824 and .518. This implies that together, the three items measure the same thing: *perceived openness*. Additionally, the Cronbach's alpha coefficient for the three items is .767 (n = 2874), suggesting the items have a high internal consistency and that the respondents tend to score consistently on these items. The items form a valid scale for perceived openness. For comparability purposes, perceived transparency, data insight, and participation possibilities are examined separately, as was done for the separate institutional openness dimensions.

Table 5.8 shows a hierarchical multiple regression analysis of perceived openness and trust. Model I includes perceived openness. Model II adds the control variables age, education, income, type of occupation, and political preference. Model III adds other citizen perceptions, such as knowledge of and affinity with real estate assessment as well as their general disposition towards government.

Table 5.8 Hierarchical regression citizens' perceptions and public trust (N=2395)

	Model I			Model II			Model III		
	B	(s.e.)	t	B	(s.e.)	t	β	(s.e.)	t
Explanatory variables									
Perceived openness									
Perceived transparency	.44	(.02)	22.48***	.42	(.02)	21.98***	.19	(.01)	13.16***
Perceived data insight	.21	(.02)	11.04***	.21	(.02)	11.02***	.05	(.01)	3.92***
Perceived participation	.25	(.01)	16.33***	.23	(.01)	15.21***	.09	(.01)	8.28***
Control variables									
Age[A]									
18-45 years				.02	(.03)	1.62	.00	(.02)	-.08
65+ years				.03	(.03)	2.21*	.00	(.02)	.32
Education[B]									
lower				.01	(.06)	.70	.02	(.04)	2.11*
middle				-.01	(.03)	-.54	.00	(.02)	.00
Income[c]									
< €20.000				-.01	(.08)	-.95	-.01	(.06)	-1.08
€21.000-30.000				.00	(.05)	.22	.01	(.03)	1.13
€31.000-40.000				.01	(.04)	.53	.01	(.02)	1.14
€41.000-50.000				-.02	(.03)	-1.48	-.01	(.02)	-1.09
> €100.000				.00	(.04)	-.06	.01	(.02)	1.35
Occupation[D]									
Municipal official				.07	(.06)	5.20***	.03	(.04)	2.86**
Other civil servant				.01	(.04)	.47	.00	(.03)	.00
Political preference [F]									
D66				.02	(.04)	1.62	.02	(.03)	1.65
CDA				.03	(.04)	1.85	.02	(.03)	1.78
ChristenUnie				.03	(.06)	2.26*	.01	(.04)	1.36
PvdA				.02	(.04)	1.18	.02	(.03)	2.25*
GroenLinks				.04	(.05)	2.63**	.01	(.03)	1.20
50PLUS				-.01	(.07)	-.57	.00	(.05)	.13
Partij voor de Dieren				-.01	(.06)	-.76	.01	(.04)	.54
SP				-.01	(.06)	-.74	.01	(.04)	1.21
SGP				.00	(.09)	-.05	.00	(.06)	.52
PVV				-.04	(.07)	-2.70**	-.01	(.05)	-1.44
Forum voor Democratie				-.01	(.07)	-.66	.01	(.05)	.90
Other party				-.06	(.07)	-4.09***	-.01	(.05)	-1.22
I do not remember				-.03	(.07)	-2.08*	-.01	(.05)	-1.32
I did not vote				-.01	(.07)	-.76	.01	(.05)	1.09
I'd rather not say				-.05	(.05)	-3.65***	.00	(.04)	-.47
Other perceptions [F]									
Knowledge							-.05	(.01)	-4.89***
Affinity							-.04	(.01)	-3.77***
General disposition towards government							.14	(.01)	12.58***
Perceived performance							.59	(.01)	43.37***
	B	(s.e.)	t	B	(s.e.)	t	B	(s.e.)	t
Constant	.57	(.04)	13.47	.62	(.05)	11.83	.33	(.07)	4.93
R^2	.57***			.59***			.81***		

[A] Age group 45-65 years (middle) is the reference category; [B] High education is the reference category; [c] Income group €51.000-100.000 is the reference category; [D] Non-civil servants are the reference category; [E] Largest incumbent party (VVD) is the reference category. [F] All perceptions (5-point Likert scale) are included as *scale* variables. *p < .05. **p < .01. ***p < .001

The first model reveals a strong relationship between perceived openness and public trust. This result is in stark contrast to the analysis of the effect of institutional openness. Especially, citizens' levels of perceived transparency seem to be a good indicator of their trust in government. Positive perceptions of openness often also mean a positive trustworthiness judgement. However, from this cross-sectional dataset, it cannot be concluded that there is a causal relationship in which one results from the other. Still, the first hypothesis that perceptions of openness and trust are related can be confirmed: *perceived openness is positively related to public trust*.

Including the control variable in model II does not change this relationship. It becomes even more clear that trust is hardly influenced by age, education, or income. In model II the effect of the control variables occupation and political preference is similar to their effect in the regression on institutional openness. Notable is the difference between model II and III. In model III, the effect of perceived openness is reduced by including other perceptions. Although in model III R^2 rises to .81, it can be seen that the effect of perceived transparency, perceived data insight, and perceived participation on trust decreases. It could be that by including so many explanatory factors, the model is full, resulting in a large R^2. Yet even if all control variables are omitted, R^2 increases to .80. The explanation for the strong explanatory power is probably the strong effect of perceived performance on trust. A separate regression model of the perception of openness and performance only, has an $R^2 = .78$ as well. These two perceptions appear to be the most important trust predictors. The hypothesis that perceived performance is positively related to public trust is supported.

Again, no clear pattern emerges from any of the demographical factors, and no profile can be made of a high- or low-trust citizen on the basis of these characteristics. The citizens that were introduced in chapter one, Mila, Rose and Jack, although realistic in their experiences and perceptions, do not represent certain age, education or income groups. Moreover, model III reveals that not only perceived openness affects trust, but other perceptions are positively related as well. Including other perceptions reveals that all perceptions are more strongly related to public

trust than institutional openness. Therein may lie possible explanations for public trust that will be reflected upon later on. Both perceptions of how well a municipality performs its task and perceived openness are closely related to trust. A citizen's general trusting disposition towards government is related to trust as well, although to a lesser extent. The sub-study on participation examines the role of prior dispositions on trust in a public encounter more closely.

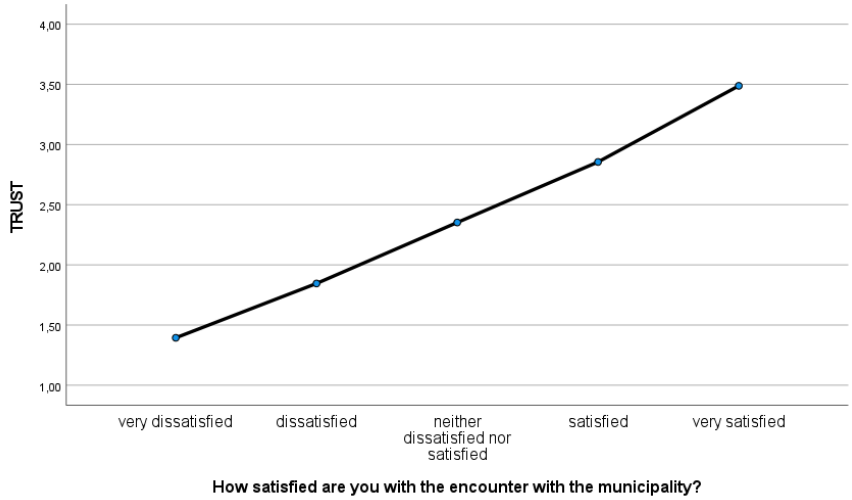
In sum, depending on the measure used, openness's relation to trust differs. The data do not show that institutional openness affects the level of public trust among home owners. None of the hypotheses about the positive effect of institutional openness measures on public trust are confirmed. Neither the level of proactive transparency, responsive transparency, data insight, nor participation reveal a significant positive effect on public trust. Any differences in trust levels between municipalities, cannot be explained by their openness towards citizens. The quantitative analysis nevertheless does bring some surprising new insights. Contrary to institutional openness, openness perceptions are strongly related to trust. This suggests that openness and trust are strongly related concepts in the minds of citizens. Moreover, perceived openness is not congruent with the level of institutional openness. Perceived openness does not correlate with institutional openness, $r(2889) = .04$, $p < .05$ nor do they have an interaction effect on public trust. This finding is upon reflected in section 5.4.2. This discrepancy merits a closer examination that the quantitative data is unable to offer.

5.3 Auxiliary findings

INSTITUTIONAL openness does not affect public trust, not even when solely examining participants, i.e. the citizens that have encountered government and experienced its openness (appendix 5.5). The differences in trust levels among participants are apparently caused by other factors. The data reveals that the level of satisfaction with public encounters plays an important role in creating public trust. As one of the aims of this study is to uncover institutional determinants of public trust, i.e. the knobs that governments can turn to influence trust, this finding is worth examining further.

The data reveals that public trust is related to concrete experiences with government. Almost one-third of the home owners that participated in the survey actively reached out to the municipality with a question or an objection. This group, on average, has less trust than the silent majority. Still, there are clear differences within the group of participants as well. This group was asked to rate their satisfaction with their encounter with government, from being very unsatisfied up to being very satisfied with it. There is a strong positive correlation between satisfaction with the encounter and public trust, $r_s(656) = .67$, $p < .001$. An analysis of variance shows that as each level satisfaction goes up, trust increases. The means of all groups significantly differ $F(4,638) = 128.91$, $p < .001$. Graph 5.3 shows that trust increases almost in a straight line, from citizens that are very unsatisfied with the encounter ($M = 1.39$, $SD = .48$) to those who are very satisfied with the encounter ($M = 3.49$, $SD = .65$).

Graph 5.3 Satisfaction with the public encounter and trust



The more satisfied citizens are with their encounter with the municipality, the higher their trust is. Even though making encounters easily available in itself was not found to affect trust, the encounter itself can positively or negatively affect trust. Furthermore, citizens that live in municipalities that do offer the informal objection procedure, on average have more trust

(M = 2.66, SD = .85) than citizens that live in municipalities that do not offer it (M = 2.51, SD = .86), conditions: t(2926)= -3.49, p = <.001. However, this cannot fully confirm that their higher trust is the result of the possibility to object informally, considering a multitude of other municipal activities or characteristics may play a role as well. Still, the type of public encounter may be a factor that affects the level of satisfaction and public trust. Citizens that engage in formal encounters on average have less trust than the ones that engage in informal encounters, although this result is not significant. Trust building opportunities lie in the participation process. These findings arouse curiosity about what happens during (different types of) encounters. Further in-depth examination of such encounters is required to fully understand the processes of creating satisfaction and building trust during public encounters.

Moreover, the data suggest that public trust is more than a 'general disposition towards government'. The absence of effects of institutional determinants of trust in the literature has raised the question of whether trust can be affected by government at all. Although it deviates from the main question of this study, this issue is briefly addressed. Regarding the formation of trust, it has been suggested that 'public trust is a general disposition towards government' and citizens do not distinguish between different government organisations. Then it is assumed that a spill-over effect occurs between levels of government, for example, from central government to local governments.

However, the data show that there is a moderately positive association between one's general disposition towards government and trust in the municipality, rs(2919) = .56, p < .001. As municipalities are part of government, it makes sense that one's 'general image of government in government' and 'trust in the municipality' are related. Yet their relationship is not nearly as strong as the relationship between trust and perceived openness rs(2889) = .73, p <.001, perceived performance rs(2876) = .85 p < .001, or satisfaction with encounters rs(810) = .67, p < .001. These results suggest that citizens do differentiate between layers of government and that experiences with government affect trust.

When it comes to public trust levels, no clear regional, geographical, or urban pattern emerges from the data. As a last sidestep of the main relationship, it is examined whether citizen perceptions of executive organisations are perceived differently from independently operating municipalities. Municipal executive organisations, to which municipalities have transferred their tasks, can be thought to be more distant from the citizen than municipalities, both geographically as well as democratically. However, a t-test reveals that public trust in independently operating municipalities (M = 2.63, SD = .85), does not significantly differ from the municipalities that are part of administrative agencies (M = 2.64, SD = .86) conditions: t(2926) = -.402, p = .69. Citizens do perceive very slightly more openness in the administrative agencies, but this difference in perceived openness is too small to be significant. Note that these agencies do have higher institutional openness scores (M = 12.28, SD = 2.91) than independently operating municipalities (M = 10.84, SD = 2.40), conditions: t(335)= -5.04, p < .001. The administrative agencies show a normal distribution of institutional openness, whereas in the municipalities, the scores are more uniformly distributed. Their institutional openness, however, does not translate into more perceived openness or in more trust. A possible explanation may be that citizens are not aware that this municipal task has been assigned to an administrative agency.

5.4 Reflecting on the results: new puzzles

5.4.1 Ambiguous effects of institutional transparency

Although empirical ambiguity predominates, normative optimism allures. The research field on transparency and trust is the largest of the dimensions of openness included in this study. It has a tradition of diversity, in which no obvious consensus emerges, that this study follows well into. Even when empirical studies find a mixed, negative, or no effect, most reflection sections remain fairly positive about a possible positive effect of transparency under different circumstances, for example, suggesting a possible positive long-term effect. On the basis of the positive tenor in the openness and trust literature, this dissertation hypothesised positive effects as well, even though empirical studies revealed a more ambiguous picture. Apparently, optimism attracts. Whenever an incident occurs that harms the public's trust in government, there is a societal call

for more transparency. This study illustrates, however, that implementing institutional transparency should not merely be done to enhance trust, since its effect is certainly not straightforward. Contrary to various indications in the literature as well as the belief within the Dutch public administration (Dutch Coalition Agreement, 2017), the relationship between transparency and trust is more complex.

A possible reason for the mixed effect is that no unity in measuring transparency exists yet. For example, Grimmelikhuijsen (2012) measures transparency as the amount of information available and includes information characteristics, such as completeness, colouring, usability, and correctness, whereas other studies examine passive transparency, such as FOI-legislation (Worthy, 2010, 2013). The present study focuses on the experiences of citizens, such as the ease of getting information (transparency channels, municipal responsiveness) and the availability of relevant information (public spending, quality control). Porumbescu (2017) suggests that not all forms of transparency lend themselves to the same set of objectives. In his view, less detailed, more general information may resonate more positively with citizens than detailed information.

Transparency is diverse. Institutional transparency as well as its operationalizations vary greatly, making it reasonable to conclude that no single impact exists. Nevertheless, this study aims to obtain more knowledge of the general mechanisms that take place between facilitating transparency, receiving it, and the formation of trust. It could be that there simply isn't any causal mechanism between transparency and trust, yet the strong relationship between perceived openness and trust suggests that there may be intermediary factors that prevent institutional transparency from landing in citizens' perceptions. The quantitative data are not able to provide such insight. An in-depth qualitative approach is needed to gain insight into the mechanisms that take place between institutional transparency and trust that may cause its effect to be mixed.

Sub-question 1: *Which mechanisms influence the effect of transparency on trust?*

The literature mentions several mechanisms that prevent transparency from affecting trust, such as 1. the difficulty of meeting growing expectations and the self-evidence of institutional transparency; 2. the demystification of a visible local government that inherently makes mistakes; and 3. transparency content that determines the direction of its effect: a positive versus a negative message or rationale versus process transparency. The present study examines another possible explanation: 4. the discrepancy between practices and perceptions: when institutional transparency efforts do not come across to the public, any effect is bound to be absent. To find out which of these mechanisms predominate, citizens need to be asked about their experiences with transparency and perceptions thereof.

5.4.2 Discrepancy between practices and perceptions

This study finds a clear discrepancy between institutional openness and perceived openness, which have a differentiated relationship to public trust. The gap between practices and perceptions is insufficiently addressed in the trust literature. The hypothesised positive relationship between openness and trust would have been confirmed merely by taking into consideration openness perceptions. *Perception studies* on the relationship between openness and trust mostly find a positive result. For example, Kim & Lee (2012) find a positive association between e-participants' assessment of government transparency and their trust in the local government, Park & Blenkinsopp (2011) find a positive association between perceived transparency, trust, and satisfaction and, Zhao & Hu (2015) find that perceived transparency is positively associated with public trust in government in China at both the city and central level. Positive perceptions coincide, as do negative ones. Vignette studies tend to find a positive relationship as well (De Vries et al., 2017; De Fine Licht et al., 2014). The aim of vignette experiments is to mimic realistic situations, and respondents are asked to base their trust on these realistic but hypothetical situations. As the openness perceptions of participants are steered in a certain direction through the stimuli presented in the vignette,

the amount of transparency reaches its audience as intended. Then perceptions do not deviate from practices. Yet, the present study shows that openness practices do not necessarily coincide with openness perceptions. De Fine Licht et al. (2014, 129) recognise the importance of the link between perceptions and practices . They hit the mark when suggesting that 'any transparency effects can only be realised if the public recognises the difference between a transparent and a non-transparent process, but not all transparency reforms may be visible to a modestly attentive public'. Two studies on freedom of information requests confirm the discrepancy between perceptions and practices (Worthy, 2010; Worthy, 2013). Worthy finds that *transparency* does increase as a result of information requests, yet *perceived transparency* amongst the respondents does not. Heald (2006) refers to the gap between practices and perceptions as *nominal* versus *effective* transparency. Through this distinction, he identifies the possibility of a 'transparency illusion' arising from a divergence between the two (Heald, 2006, 34). Even when transparency efforts increase, the opposite may be experienced. The present study confirms that high institutional openness is not always recognised as such, causing an 'openness disillusion' on the part of government.

In sum, when mere perceptions are examined, one will likely find a positive relationship between openness and trust. Yet, when examining institutional openness, positive associations are less likely. Even though openness and trust are strongly related concepts in the minds of the public, the discrepancy between practices and perceptions prevents institutional openness from affecting trust. This suggests that the link to influencing trust not only lies in implementing institutional openness measures but more so in effectively transferring that openness so that government is actually experienced and perceived as open. How this can be done is worth examining further. The differentiation between institutional and perceived openness contributes to a more sophisticated insight into the relationship between openness and trust. At the same time, it uncovers a new research puzzle as to why perceptions are not in line with practices. How come, generally, citizens do not fully recognise or appreciate institutional openness efforts? What could local governments

do differently in order to effectively transfer their openness, so that they are perceived as open as well? These questions cannot be answered by quantitative data alone. To gain more insight into the relationship between openness and trust, an in-depth examination of the mechanisms regarding perception formation is required.

Sub-question 2: *What makes taxpayers perceive local government as open and trustworthy?*

5.4.3 Interrelationship between participation and trust

Participation's potential to promote trust lies in satisfaction with the process, not so much in its openness. On the basis of deliberative democracy theory, it was hypothesised that accessible, available, and open participation possibilities promote public trust. However, institutional participation was not found to affect the trust of the general public or the trust of participants in particular. Apparently, other factors weigh heavier on public trust than the openness of institutional participation. When evaluating trust in local politicians, citizens tend to apply customer-oriented factors (system output) to a greater extent than citizen-oriented factors (system input through participation), although these two considerations are complimentary rather than mutually exclusive (Gustavsen et al., 2017). Mizrahi, Vigoda-Gadot, and Cohen (2010) find that public trust correlates more strongly with performance and satisfaction than with having a say in decision-making processes. Porumbescu (2017) finds that both satisfaction with public services and the evaluation of the quality of life in the municipality are more strongly correlated to trust than voice or transparency. Mizrahi, Cohen and Vigoda-Gadot (2020) consider satisfaction to be a key factor in creating trust. Satisfaction appears to be a stronger trust predictor than participation. In the present study, too, the more satisfied participants are with the encounter, the more trust they have. This strong positive association indicates that participation does have the potential to promote trust. Yet, what exactly happens during public encounters that contributes to trust, the survey data are unable to uncover. What public encounters mean in specific contexts (Bartels, 2013, 478) requires a qualitative examination of experiences with and perceptions of local government. Why are citizens

(dis)satisfied and when does satisfaction result in more trust? Different aspects of encounters, such as the ease of contact or taking the matter seriously, can contribute differentially to the assessment of satisfaction (Bradford, 2009, 39; MacQueen & Bradford, 2015, 432). Satisfaction and trust during public encounters merit a closer look.

Sub-question 3: *What shapes participants' satisfaction and trust?*

Moreover, the data show that citizens who exercise their voice, have less trust than the group that remains silent. Additionally, citizens who tried multiple modes of contact had the lowest trust. However, no cause-and-effect can be distilled from the survey results, as it is unclear which one comes first. It is unclear whether low trust is a result or a determinant of participation. The level of trust may also affect the way people participate. Participation does not take place from a blank sheet, as citizens have a prior image of government. The survey results show that public trust is higher in municipalities that offer *informal encounters* than in municipalities that do not, suggesting there may be opportunities to build trust. Do citizens choose a *formal* objection route because of their low trust, meaning that the level of trust has an impact on starting a certain procedure? Or do these citizens have low trust because they are dissatisfied with the formal procedure, meaning that the procedure affects their trust? Or is it a combination of both? There may be a reciprocal relationship between trust and participation (Wirtz & Birkmeyer, 2015, 392), trust levels influence participation (Lee & Schachter, 2019, 409), and there are various drivers to participate (Schmidthuber et al., 2017, 466).

The literature provides several cues for the effect of trust on participation. Lee & Schachter (2019) mention two theories that relate participation to either high or low prior trust. *Stealth democracy theory* suggests that citizens participate because of a lack of trust and raise their voices to get a more responsive government. *Deliberative democracy theory* maintains that citizens are more likely to participate in government processes in trustworthy political systems. Especially face-to-face encounters may have the potential to enhance the quality of services and outcomes (Bartels, 2013, 469) and may be able to nurture stable personal relationships through constructive communication (Bartels, 2013, 473). However,

Wijnhoven et al. (2015) examine the willingness and motivations to participate and find that dissatisfied citizens are not more or less likely to engage, and political disappointment does not affect the willingness to engage in open government projects. The effect of previous dispositions on the type of participation and the effect of different participation procedures on public trust are worth examining further. To the best of my knowledge, few empirical studies delve deeper into the possible interrelationship between participation and trust.

5.4.4 Exchange of public values?

A final reflection on the survey results is the distinction between the municipalities that have outsourced this task to an *administrative agency* in which multiple local governments work together on one or more tasks, often located outside of the municipality, and the municipalities that have kept the responsibility for the task of real estate assessment (WOZ) and local taxation in-house. These administrative agencies have the image that they are further removed from the citizen, both geographically and administratively. They are regularly the subject of public debate as to their democratic legitimacy. After all, the elected municipal council places tasks at a distance and thereby limits its own authority to make decisions and the accountability possibilities regarding the outsourced tasks.

The survey data show that, on average, the administrative agencies have implemented more institutional openness measures for the residents in their region than the independently operating municipalities. Administrative agencies offer more opportunities to ask questions, address issues, and file objections and are, in that sense, more accessible than independently operating municipalities. A well-organised feedback loop has the potential to increase data quality and decisions. Still, perceptions of openness and trust do not differ. This raises the question of whether administrative agencies are further removed from citizens than municipalities or not. The observation that the number of partnerships through administrative agencies in the Netherlands continues to increase (Staat van het Bestuur, 2020) does not yet imply that the public administration is moving further away from citizens. Regarding local taxation, administrative agencies do not appear ‘out of reach’ to the public. This result could, however, be different in other domains.

Why administrative agencies on average succeed better in implementing openness measures than independently operating municipalities, is not examined in this study. It may be related to their organizational structure, in which their economy of scale makes it possible to organize processes more efficiently and deploy employees more effectively. It is an observation, but it is not the aim of this research to distil determinants of institutional openness.

These findings require a contemplation of how values such as openness and democratic legitimacy relate to each other. It can be argued that an exchange of public values takes place. Less democratic influence of citizens on *general decision making* by local government on the one hand (the municipality attributes certain tasks to an organisation outside the municipality), yet more transparency, data insight, and possibilities to influence *individual decisions* on the other hand (more institutional openness by administrative agencies). In the light of the discussion on their democratic legitimacy, it is interesting to notice that in the public perception, these administrative tax organisations are not less visible to citizens just because they are placed 'at a distance'. The number of citizens who made contact by telephone, lodged an informal objection, or lodged an objection via legal representation is nearly equal for municipalities as for administrative agencies. Administrative agencies implement more openness measures, and citizens' openness perceptions are not lower than those of municipalities either. When it comes to the possible exchange of public values, including public perceptions on the prevalence of these different public values, this could give a more complete picture. Still, for both municipalities and administrative agencies, when it comes to promoting trust, the perception of openness is more important than institutional openness.