

### **Deliverable D3.3**

## WP3 Research report on the findings of the statistical analyses and comparative case studies

Point of ContactKoen VerhoestInstitutionUniversiteit Antwerpen (UAntwerpen)E-mailkoen.verhoest@uantwerpen.bePhone+32 484 965 015

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Authors	Koen Verhoest (UAntwerpen), Bastiaan Redert (UAntwerpen), Frederique Six (UAntwerpen), with input from	
	Marko Hack (Uni-Speyer), Rahel Schomaker (Uni-Speyer), Dominika Latusek- Jurczak (Kozminski), Anna Pikos (Kozminski), Juan Carlos Triviño-Salazar (IBEI), Joaquín Rozas Bugueño (IBEI), Rocío Baeza Fernández (IBEI), Jacint Jordana (IBEI), Silje Marie Thorstensen (UiO), Tobias Bach (UiO), Eduardo Guaschino (UNIL), Martino Maggetti (UNIL), Ioannis Papadopoulos (UNIL).	
Reviewer	Dominika Latusek-Jurczak (Kozminski)	



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### **Abbreviations, Participant short names**

#### Abbreviations

EEA	European Economic Area
EU	European Union
GDPR	General Data Protection Regulation
PCA	Principal Component Analysis
RQ	Research Question
SNA	Social Network Analysis
WP	Work Package

## Participant short names

UAntwerpen Universiteit Antwerpen   IBEI Institut Barcelona d'Estudis Internacionals, Fundacio Privada
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 Sarl



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#### **Summary**

In this TiGRE deliverable, we report on the findings of Work Package 3 (WP3). In short, WP3 studies to what extent dynamics of trust and distrust between stakeholders in regulatory regimes are related to interaction (and cooperation) among these stakeholders, within and across levels, and how this interaction influences perceptions of regulatory consent, compliance and regime confidence among the stakeholders of regulatory regimes. We analyze these questions through in-depth case studies of specific regimes, encompassing document analysis, as well as in-depth interviews and social network analysis techniques. Using these various data, we can infer the causal relations between interactions and levels of trust as well as regime performance.

First, we find that trust is largely determined by personal predispositions, attitudes, and sector and country features. Also repeated trustworthy behavior and intentions positively affect trust among actors. Interactions (such as contacts, information sharing and having similar/different views) among actors relate clearly and positively to trust levels between actors, but to a lesser extent with trust towards the regulatory agency. Whereas we see significant relations between trust and interactions, this is less clear for the relation between distrust in terms of watchfulness and interactions.

Furthermore, the trustworthiness of regulatory agencies positively affects the perceived performance of a regulatory regime in terms of keeping the citizens safe from harm and bringing the regulatees to comply. Yet, we also find that contextual factors matter, especially in the case of a lack of trust towards the agency. Based on survey data, we find that high trust relations towards regime actors is positively related with both the performance and legitimacy of a regulatory regime. Yet, we also find that 'watchful trust' (in terms of high trust combined with high watchfulness) improves performance more, and that high watchfulness relations weakens the legitimacy of the regulatory regime. The legitimacy of a regulatory regime refers to the extent stakeholders find the procedures and the way decisions are taken appropriate and legitimate, even in case they do not agree with the content of decisions taken. Additionally, using social network analysis, we find that more dense high trust relations and dense interactions among all actors, including regulatees, interest groups, and consumer associations, relate to higher regime performance. The effect of dense high trust relations between actors within the regime on the legitimacy is also mostly positive, but rather weak and not univocal.

Lastly, we also identify variation across the studied actors, sectors and countries. First, we find that consumer associations are in many sectors the most critical towards other actors in the regime. Also, they are more detached from other actors in terms of having less interactions. We thus see the need for increased empowerment of and interactions with consumer associations, so that they can fully play their role in defending consumers' and users' interests. Trust in legislative politicians is often relatively lower, often because to their limited expertise and knowledge about the regulatory issues at play. Second, data protection is associated with lower levels of regime performance, less dense trust and watchfulness relations, and less dense contacts and information sharing. The sector is less mature and institutionalized, meaning that actors are still looking for their role. As a result, often regulatory agencies have until now primarily focused on optimizing their internal organization and procedures and building up their expertise, capacity and enforcement experience. In turn, the agencies often have so far focused relatively less on building frequent and formalized interactions with regulatees, interest groups and consumer organizations as well as with relevant other public actors. In contrast, finance and food safety have higher levels of performance, more dense trust and watchfulness relations, dense contacts and information sharing, and more pronounced coalitions of similar or different views. These are mature sectors, with actors who know each other and play their roles, and share information with each other, leading to more nuanced and better-informed assessments. In these sectors, different views do not matter for trust, as long as there is respect for each other's roles and capacities. Finally, we also find that country-specific factors like the countries' general level of trust in public institutions affect trust and watchfulness between actors and in the regime. We also see that federal countries add levels of complexity, as interactions between actors are differentiated within and between levels of government. This has effects on trust in actors and in these regimes.

### 1. Introduction

#### **1.1 Objectives**

This main objective of this report is linked to Work Package 3 (WP3) of the TiGRE project. In short, WP3 studies to what extent dynamics of trust and distrust between stakeholders in regulatory regimes are related to interaction (and cooperation) among these stakeholders, within and across levels, and how this interaction influences perceptions of regulatory consent, compliance and regime confidence among the stakeholders of regulatory regimes. These analyses also allow us to disentangle how the dynamics of trust towards regulatory actors at the EU level and towards actors at the national level influence each other.

To achieve this, in task 3.1 this WP first performed statistical analyses on the survey data from WP2 to uncover the relation of patterns and dynamics of trust and distrust between stakeholders with stakeholders' perception of the level of regulatory consent, compliance and regime confidence. These analyses are reported in this deliverable, D3.3.

WP3 also seeks to understand the mechanisms underlying these causal relations, through in-depth case studies of specific regimes, encompassing legal analysis, document analysis, as well as in-depth interviews and social network analysis techniques (e.g. mapping the density of various interactions).

More specifically, through task 3.2 and 3.3, all six involved country partners conducted in-depth case studies of the three regulatory regimes under study in their own country. In total, this resulted in 18 case studies in six countries (Belgium, Spain, Germany, Poland, Switzerland, and Norway) which differ in terms of their administrative culture, their state structure, their membership of the EU, and the level of political trust. Using social network questionnaires and semi-structured interviews with different kinds of stakeholders, we mapped to what extent and how different stakeholders interact and cooperate with one another. Moreover, we also studied how these patterns of cooperation are, according to the stakeholders, related to trust and distrust dynamics. Moreover, we studied how this interaction and cooperation in turn affects stakeholders' perception about the functioning of the regulatory regime, its evolution and ultimately regulatory consent, compliance and regime confidence. For each case study a case study report – which we call in this deliverable 'sector report' - has been drafted by the involved partner based on a common template. These sector reports are compiled in D3.1 and are part of the TiGRE case study repository<sup>1</sup>.

D3.1 also provided a detailed description of the methodology used, and described how the social network survey, interviews, and the survey about regime effects were designed and, subsequently, analyzed.

This Deliverable D3.3 reports on the main findings and lessons of the quantitative analyses (task 3.1) and the qualitative cross-case analysis (task 3.4) of the 18 different case studies.

The deliverable D3.3 answers the following research questions, which are guiding for its structure:

RQ1: To what extent are dynamics of trust and distrust between stakeholders in regulatory regimes related to interaction (and cooperation) among these stakeholders, within and across levels, including how the trust towards regulatory actors at the EU level and towards regulatory actors at the national level influence each other; as well as

RQ2: How do interactions and trust/distrust relations influence perceptions of regulatory consent, compliance and regime confidence among the stakeholders of regulatory regimes.

<sup>&</sup>lt;sup>1</sup> Available for download on the TiGRE website at <u>https://www.tigre-project.eu/tigre-library/#public-deliverables</u> and on CORDIS at <u>https://cordis.europa.eu/project/id/870722/results</u>



Because we operationalized distrust as watchfulness, to avoid confusion, we use this term in many of the discussions of the analyses presented below instead of distrust. Being watchful for actions of the other actor, negatively impacting the own organization, based on feelings of suspicion and negative expectations of harmful actions by the other actor is a behavioral expression of distrust<sup>2</sup> typically occurring when one cannot opt out from the interaction with the other actor. This applies to actors embedded in regulatory regimes. For instance, in the case of regulated industries that cannot withdraw from oversight by the regulatory agency in charge (Bach et al. 2022).

<sup>&</sup>lt;sup>2</sup> As distrust is a sensitive research subject (Saunders and Thornhill, 2011), it is advisable not to ask the respondents about their level of distrust directly but, instead, to focus on the kind of behavior that distrust triggers. Distrust refers to the intentional and behavioral avoidance to suspend vulnerability on the basis of negative expectations about a counterpart under conditions of risk, dependency and uncertainty (Oomsels et al. 2019; Guo et al. 2017). Despite the different reasons why an actor might be distrusted, a core element of distrust is that it evokes feelings of suspicion and expectations of harmful outcomes related to the target (Dimoka 2010; McKnight and Chervany 2002; McKnight et al. 2004; Guo et al. 2017; Ou and Sia 2010; Bertsou 2019), leading to risk-averse behaviour and watchfulness (Cho 2006; McKnight et al. 2004; Lewicki et al. 1998; Sitkin and Stickel 1996; Guo et al. 2017; Oomsels et al. 2019). Two recent studies, which proposed scales to measure distrust between organizations (Raza-Ullah and Kostis 2020) and between individual buyers and shops in e-commerce (Rusk 2018), refer to this crucial aspect of distrust: being watchful because of negative expectations of harmful actions from the actor who is being distrusted.



# 2. How do trust and distrust dynamics relate to interactions among stakeholders in regulatory regimes?

In this section we discuss the findings regarding the first research question, being:

RQ1: To what extent dynamics of trust and distrust between stakeholders in regulatory regimes are related to interaction (and cooperation) among these stakeholders, within and across levels, including how the trust towards regulatory actors at the EU level and towards regulatory actors at the national level influence each other?

This research question is dealt with through several sub questions:

RQ1.1 How do trust and distrust in terms of watchfulness in regime stakeholders relate to each other?

RQ1.2 How do trust and distrust in terms of watchfulness relate across different levels of government, more precisely how the trust towards regulatory actors at the EU level and towards regulatory actors at the national level influence each other?

RQ1.3 How do interactions among regime stakeholders relate to trust and distrust in terms of watchfulness between these actors?

The rest of this section is structured along these sub research questions, and for each of the sub research questions first the methodology is briefly recapitulated (with reference to other deliverables in which data collection is fully detailed) and then the main findings are discussed.

## 2.1 How do trust and distrust in terms of watchfulness in regime actors relate to each other (RQ1.1)?<sup>3</sup>

The first sub research question we analyze is to *what extent trust and distrust in terms of watchfulness towards regime actors relate to each other*. In this research distrust is measured by watchfulness, more particularly, the extent to which an actor should be watchful based on suspicion and negative expectations of harmful actions (more precisely the extent to which an actor should be watchful based on suspicion and negative expectations actions which negatively impact the former actor). In case an actor report to put high trust in another actor in the regulatory regime, like the regulatory agency, does this imply that the former actor is not watchful towards the latter? Or could actors with high trust in another actor be highly watchful towards that actor at the same time? Conversely, could it be that actors with low trust in another regime actor might be at the same time not watchful towards the other regime actor?

In the literature on trust and distrust, the extent to which trust and distrust can co-exist is an ongoing debate (see for the argument of co-existence: e.g. Lewicki et al. 1998; Guo et al. 2017; Six and Verhoest 2017; Berstou 2019; Oomsels et al. 2019). The relation between trust and distrust is relevant in order to know how to interpret trust relations between actors. High trust in a specific actor could be either 'good faith trust' (high trust combined with low watchfulness), but also 'watchful trust' (high trust combined with high watchfulness). Similarly, low trust in a specific actor in the regulatory regime could point to either active distrust (low trust and high watchfulness) or rather indifference (low trust combined with low watchfulness).

Specifically in this section, we focus on how trust and distrust in terms of watchfulness in the national regulatory agencies relate in and across the three sectors studied in TiGRE (data protection, finance and food safety) in the different countries.

<sup>&</sup>lt;sup>3</sup> This section is based on the TiGRE conference paper: Verhoest Koen, Latusek -Jurczak Dominika, Six Frederique, Wynen Jan, Maman Libby, Trondal Jarle, Papadopoulos Yannis, Schomaker Rahel (2022). How do trust and distrust relate in public governance settings? Testing the conceptual link in regulatory relations. Presented at the ECPR General Conference 2022 Innsbruck.



#### 2.1.1 Data and methodology

For this research question we use the survey data collected in WP2, in which actors in a regulatory regime, being legislative politicians, ministries and other executive bodies, regulatory agencies, regulatory intermediaries, regulatees and their interest groups, as well as consumer associations, were asked questions on their trust in and watchfulness towards the regulatory agency in the regulatory regime. The regulatory regimes under study included data protection, food safety and the regulation of the financial sector. Please see (Bach et al. 2022) for full information about the survey, the respondents, measurements and data.

In this paper, we focus on stakeholders' level of trust and distrust toward the core national regulatory agencies, as well as their perceived trustworthiness of these agencies<sup>4</sup>. These agencies are core agencies because they play an important role in regulatory regimes in terms of preparing, deciding on, implementing, mediating, and supervising regulations. Therefore, we only included in our dataset for these analyses responses of those respondents who indicated that they are familiar with the national regulatory agencies.<sup>5</sup> As these analyses require full data on the survey questions regarding trust, watchfulness, trustworthiness, social demographic variables and some other features, in this dataset the number of respondents is 752, composed of different subgroups as indicated in Table 1. This subsample is rather representative for the full set of survey responses for the WP2 survey.

Number of respondents per actor type	Financial sector	Food safety sector	Data protection sector	Total
Legislative politicians and executive bodies	36	122	61	219
Regulatory intermediaries	25	43	11	79
Regulatees	61	67	74	202
Interest groups	24	34	18	76
Ombudsman and non-judiciary arbitration bodies	51	66	59	176
Total	197	332	223	752

#### Table 1: Respondents included in the analyses (N=752)

<sup>&</sup>lt;sup>5</sup> The TiGRE survey also included respondents from regulatory agencies; however, as we are interested in trust of stakeholders in regulatory agencies, and since the regulatory agencies did not get questions on trust in and trustworthiness of their own organizations, these responses are excluded from the data.



<sup>&</sup>lt;sup>4</sup> The following items were used: (1) To measure trust in regulatory agencies, we use the following item as recommended by the OECD Guidelines on Measuring Trust (2017): "Think of your experience in your organization. How much trust do you have in each of the following institutions? Please answer on a scale from '0' to '10', where '0' is no trust at all and '10' is complete trust.". (2) To measure distrust in regulatory agencies, we formulated the following item: "In your opinion, should your organization be watchful that the following institutions' actions do not negatively impact your organization? Please answer on a scale from '0' to '10', where '0' is not watchful at all and '10' is very watchful." This measure captures two key behavioral expressions of distrust: watchfulness and fear of negative consequences. It also refers to actions that negatively impact the respondent's organization to ensure (a) that respondents think of conscious deeds, not merely routine activities, and (b) that the question conveys the vulnerability and dependency on the other actor and the uncertainty and risk of negative consequences. (3) To measure the different dimensions of trustworthiness (integrity, benevolence, competence), The following items were used:

The [name of core actor] is an important supervisory institution for [sector]. A main task of the [name of core actor] is therefore to assess compliance with existing rules for [sector].

On a scale from 0 (never) to 10 (always), to what degree do you think [name of core actor] will...

<sup>...</sup> follow sound principles when interacting with others? (integrity)

<sup>...</sup> take the interests of organizations like mine into account? (benevolence)

<sup>...</sup> perform its tasks in a very competent way? (competence).

The level of trustworthiness is measured by the factor comprising these three dimensions.

We analyzed the data using graphical representations and partial correlations. When studying the relation of trust and distrust in terms of watchfulness through correlations, we need control for an extended set of control variables in order to avoid biases due to under- or overrepresentation of certain groups of respondents in our data. The control variables included socio-demographics (gender, age, education), the organizational affiliation and tenure of the respondent, country dummies, the actor type to which the respondent belongs, and the extent to which the respondent is knowledgeable about the regulatory agency. Partial correlations measure the correlation between Y and X, holding all other variables constant. That is, the effects of all other factors are partialled out, leaving only the contribution of X. A partial correlation is the relationship between x and y once the shared variance between x and x2 has been removed from x and once the shared variance between y and x2 has been removed from y. To facilitate interpretation of the partial correlations, we also provide the squared partial correlation, which tells us how much the unique contribution of an independent variable accounts for the total variation in dependent variable. In other words, it gives the increment in R<sup>2</sup> when an independent variable is added.

#### 2.1.2 Results from the analyses on the relation between trust and watchfulness

First, we plot the level of trust towards national regulatory agencies and the level of watchfulness towards the same actors graphically on a trust–watchfulness two-axis scheme, in which different combinations of high/low trust and high/low watchfulness are shown in different quadrants (see Figure 1):



Figure 1: Trust-watchfulness quadrants (based on Lewicki et al. 1998; Oomsels 2016; Saunders and Thornhill 2004)

Figure 2 plots the responses on trust and watchfulness in national regulatory agencies by regime actors for the total sample on the trust–watchfulness axis scheme.





Scatter Plot of Trust and Watchfulness in National Regulatory Agencies (all three sectors)

Figure 2: Trust-watchfulness quadrants for the whole sample

We can make the following observations.

- There are only a small set of actors which report that their trust in the national regulatory agency is low, as well as their watchfulness towards the national regulatory agency (see the small number of dots in Quadrant Q2 on Figure 1). So, few public and private actors report a position towards the national regulatory agencies which could be considered to be rather indifferent and detached because these actors do perceive to have a perceived dependency from these agencies from these actors. These actors do not have an outspoken and clear opinion on whether to trust or to be watchful towards the regulatory agency.
- Also a somewhat larger group of respondents, but still limited in number, reports to have low trust in the national regulatory, while they also report to be highly watchful (see the dots in Quadrant Q1 on Figure 1). So, some public and private actors report a position which is reflecting (active) distrust, but this group is still rather limited.
- A bigger group of respondents reports high trust in the regulatory agency while their watchfulness towards the national regulatory agencies is low (see the more numerous dots in Quadrant Q3 on Figure 1). This group of public and private actors has pervasive trust in the regulatory agency which we label as 'good faith trust'. They put trust in the agency without any important reservations or nuances, and their trust applies to all parts, dimensions and activities of the regulatory agency.
- However, the largest group of actors, reports high trust in the national regulatory agency, while they are at the same time very watchful towards this agency in terms of actions that might harm them. This group comprises private but also public actors. These actors' attitude might be interpreted as a combination of domain-specific trust and domain-specific watchfulness, and can be labeled as 'watchful trust': While they trust the national regulatory agency to a high level, they are at the same time watchful towards the national regulatory agency because of expectations that the agency takes actions that might harm them. This means that they differentiate their assessment of the national regulatory agency regarding different tasks (e.g. high trust in the core task of inspections and enforcement, but watchful for the way they take positions at the EU-level), different parts of the organization (e.g. high trust in the central offices, but watchful towards the regional offices because of heterogeneous interpretation of rules), and/or regarding different aspects of the relationship (e.g. high trust in their competence, but watchful because of the perception that the agency does not share information in an open way).



These general patterns largely remain the same when we diversify our data across countries (see different colors per country on Figure 2), or per sector. Figure 3, Figure 4 and Figure 5 show the patterns for the three sectors. Moreover, one might ask whether these patterns vary between different trustors, implying for example that public actors would express the pattern of only 'good faith trust' in the national regulatory agency (i.e. high trust and low watchfulness) and regulatees and their interest groups only positions of pervasive distrust or watchful trust. However, Figure 3, Figure 4 and Figure 5 show that in all three sectors, public actors and private actors show more or less similar patterns as seen above when assessing their trust/watchfulness in the national regulatory agencies<sup>6</sup>.



Figure 3: Trust-watchfulness quadrants for the data protection sector



Figure 4: Trust–watchfulness quadrants for the finance sector

<sup>&</sup>lt;sup>6</sup> It might be noted that the four patterns we list above regarding trust/watchfulness towards the regulatory agency are not specific for that kind of trustee. However, similar patterns of trust/watchfulness observations are present when considering legislative politicians from the national parliament or courts as trustee (not shown in this report). Thus, the trust/watchfulness patterns do not seem to be trustee-specific.





Figure 5: Trust-watchfulness quadrants for the food safety sector

The graphical representation of the trust/watchfulness patterns towards the national regulatory agencies implies that trust and watchfulness come in all kinds of combinations. The partial correlation analysis on the data of the total sample and per sector confirms this finding: according to the analysis (see Table 2), the partial correlation between trust and watchfulness is showing a negative, but very weak association. Table 2 shows variation across sectors: while in the finance sector trust and watchfulness do not significantly relate to each other, in data protection there is a significant negative partial correlation which is weak to moderate in size. An explanation is that in the data protection sector, respondents express positions with relatively less nuance, like an attitude of low trust is combined with high watchfulness (or the other way around) more often when compared to food safety and finance sector. This might be explained by data protection being a regulatory regime which is rather young, less mature and more in flux, given the recent adoption of the General Data Protection Regulation (GDPR) on 25 May 2018. The less mature character of the sector implies that national regulatory agencies are still seeking the most effective way to enforce data protection legislation and are generally less well-known and less predictable for actors in the regime, which in turn leads to less nuanced judgements of trust and watchfulness by other actors. This combines with the perceived threat of (large) fines in the GDPR. Data protection is also more intangible as an outcome to assess for stakeholders, compared to safe food or safe financial assets. Hence, stakeholders in data protection report relatively more trust and watchfulness perceptions which are negatively correlated.

Table 2: Partial correlations between trust ar	d watchfulness towards the national	regulatory agency
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N=752	Partial correlation coefficient (square term of partial correlation) Total sample and per sector
Trust and Watchfulness	Total sample -0.187*** (0.035)
	Finance: -0.106 (0.011) Food safety: -0.141** (0.020)

But what are the bases for these trust assessments and watchfulness levels towards national regulatory agencies, and are these similar or different? Here, we focus on various dimensions, namely stakeholders' perceptions on 1) the ability or competence of regulatory agencies, 2) the agency's benevolence, and 3) the integrity of the national regulatory agency. First, partial correlations were run on how these dimensions correlate with levels of trust in the agency. Table 3 shows that across the sectors, trustworthiness is a major



driver for trust, which is strongly correlated. Ability/competence and integrity are somewhat stronger drivers than benevolence (which has a medium strong correlation) with trust. This pattern holds for all three sectors, but again correlations are the strongest (both in terms of highest coefficients and highest levels of significance) in the financial sector and less pronounced in data protection<sup>7</sup>. This relates to the previously made argument that data protection is a sector which is less mature and more in flux where stakeholders have less clear views on how to assess the national regulatory agencies.

Table 3: Partial correlations between trustworthiness/trustworthiness dimensions and trust watchfulness towards the national regulatory agency<sup>8</sup>

Trust (N=752)	Partial correlation coefficient (square term of partial correlation; square term of semi-partial correlation) Total sample and per sector	
Trustworthiness and Trust	Total: 0.571*** (0.327)	
	Finance: 0.764*** (0.583) Food safety: 0.523*** (0.273) Data protection: 0.400*** (0.160)	
Ability/competence and Trust	Total: 0.575*** (0.331)	
	Finance: 0.771*** (0.595) Food safety: 0.501*** (0.251) Data protection:0.418*** (0.175)	
Benevolence and Trust	Total: 0.417*** (0.174)	
	Finance: 0.617*** (0.380) Food safety: 0.400*** (0.160) Data protection: 0.261*** (0.068)	
Integrity and Trust	Total: 0.543*** (0.295)	
	Finance: 0.706*** (0.498) Food safety: 0.517*** (0.267) Data protection: 0.368*** (0.135)	

Second, we also calculated partial correlations on how the trustworthiness dimensions are correlated with levels of watchfulness towards the agency. Table 4 shows that in the total sample, trustworthiness and its dimensions are negatively correlated with watchfulness, but only very weakly. Moreover, they only contribute to less than 1% of the variance of watchfulness, so indicating that their importance to explain watchfulness is extremely marginal. When looking at the three sectors, this negative partial correlation is even absent in the finance and food safety sector, while the correlations in the data protection sector resemble (and probably account for) the correlations found in the total sample. Still, in the data protection sector the negative correlations of trustworthiness and its dimensions with watchfulness levels are very weak, and marginally important in explaining stakeholders' watchfulness towards the national regulatory agency. Again, this can be explained by the less mature and less settled state of the data protection sector.

<sup>&</sup>lt;sup>8</sup> Partial correlation controls for socio-demographic variables, country, respondent type and the extent of interaction of the trustor with the trustee.



<sup>&</sup>lt;sup>7</sup> This is also visible in the squared (semi-)partial correlation, which tells us how much the unique contribution of each trustworthiness dimension accounts for the total variation in the trust assessment. In other words, it gives the increment in R<sup>2</sup> when the trustworthiness dimension is added to the model. These squared partial correlations have clearly lower values in the data protection sector, compared to the financial sector, with the food safety sector being somewhat in-between.

Watchfulness (N=752)	Partial correlation coefficient (square term of partial correlation; square term of semi-partial correlation) Total sample and per sector	
Trustworthiness and Watchfulness	Total: -0.114*** (0.013)	
	Finance: -0.041 (0.002) Food safety: -0.073 (0.005) Data protection: -0.190*** (0.036)	
Ability/competence and Watchfulness	Total: -0.102*** (0.010)	
	Finance: -0.055 (0.003) Food safety: -0.058 (0.003) Data protection: -0.162**(0.026)	
Benevolence and Watchfulness	Total: -0.104*** (0.011)	
	Finance: -0.048 (0.002) Food safety: -0.056 (0.003) Data protection: -0.181*** (0.033)	
Integrity and Watchfulness	Total: -0.103*** (0.011)	
	Finance: -0.013 (0.000) Food safety: -0.082 (0.007) Data protection: -0.152** (0.023)	

Table 4: Partial correlations between trustworthiness/trustworthiness dimensions and watchfulness<sup>9</sup>

#### 2.1.3 Conclusion: how do trust and watchfulness relate?

This section analyzed the relationship between trust and distrust in terms of watchfulness towards regime actors in regulatory regimes, specifically in the areas of data protection, finance, and food safety in different countries. The section examined if high trust towards a regulatory agency implies low watchfulness towards it, or if high trust can coexist with high watchfulness. Conversely, it studied if actors with low trust can be not watchful towards the agency. The analyses showed that trust and watchfulness come in different combinations, which has implications for how actors interpret trust relations between regulatory actors.

The analyses first plotted the level of trust and watchfulness towards national regulatory agencies graphically on a trust-watchfulness two-axis scheme. We observed that there are few public and private actors who report low trust and low watchfulness towards the national regulatory agency, and there is a more significant number of actors who report low trust but high watchfulness towards the agency. On the other hand, we found that a bigger group of actors reports high trust but low watchfulness towards the agency, while the largest group of actors reports high trust and high watchfulness towards the agency. Here, the Swiss case is somehow emblematic of the co-existence between trust and watchfulness towards regulators. Almost all the responses display a clear equilibrium between trust and watchfulness with very little variation between sectors.

We analyzed the data across countries and sectors to check if these patterns are robust, and we find that the general patterns remain similar across different countries and sectors. We also investigate whether these patterns differ between trustors, such as public actors, regulatees, and their interest groups. However, we find that public and private actors show similar patterns when assessing their trust and watchfulness towards national regulatory agencies.

<sup>&</sup>lt;sup>9</sup> Partial correlation controls for socio-demographic variables, country, respondent type and the extent of interaction of the trustor with the trustee.



A partial correlation analysis on the data of the total sample and per sector indeed confirmed that trust and watchfulness come in all kinds of combinations. A weak negative association between trust and watchfulness, and some sectoral differences in this association, are found. For instance, in the finance sector, trust and watchfulness do not significantly relate to each other, while in data protection, there is a weak to moderate negative partial correlation.

Overall, the findings suggest that trust and watchfulness can coexist, and the nature of the trust relations between actors depends on the combination of trust and watchfulness. We will see later in this report that the combinations of high trust and high watchfulness may have positive effects on perceived performance of the regime, meaning that the coexistence of high trust and high watchfulness in the sense of 'trust but verify' can be functional to the performance of the regime. These findings have implications for how actors interpret trust relations between regulatory actors. For example, high trust towards a regulatory agency does not necessarily mean low watchfulness towards it, and low trust towards an agency does not necessarily mean high watchfulness.

# 2.2 How do trust and watchfulness relate across different levels of government (RQ1.2)?<sup>10</sup>

The second sub research question we analyze is 'How do trust and watchfulness relate across different levels of government? More precisely, how do the trust and watchfulness towards regulatory actors at the EU level and towards regulatory actors at the national level influence each other?'

#### 2.2.1 Data and methodology

In this section we refer to two sets of analyses. For the first analysis we use data from the cross-sectional survey conducted in WP2, related to the trust(worthiness) assessment of the national regulatory agencies on the one hand and trust in the EU regulatory bodies on the other hand. Please see (Bach et al. 2022) for full information about the survey, the respondents, measurements and data, as well as footnote 2 for the measurements used. Second, the analysis of the survey experiment embedded in the stakeholders' survey conducted in WP2, is explained in (Bach et al. 2022) and its findings are reported in D2.2<sup>11</sup> (p.53-56). We repeat the most relevant findings here, in order to link them with findings of the first analysis as they bring nuances.

#### 2.2.2 Findings

How do stakeholders in a regulatory regime form their trust assessment of regulatory agencies in a multilevel context (i.e. when regulation can happen at the EU- and national level)? Borrowing from literature on how citizens trust governmental institutions in a multi-level context, two major lines of reasoning emerge. On the one hand, citizens form their trust based (a) on connotations linked to *governmental level* to which the institution is attached. On the other hand, citizens would base their trust on a rational evaluation of the *performance* of the institution (Muñoz et al., 2011; Muñoz, 2017). In that literature, evidence is found that governmental level matters for citizens' assessment of trust. There are two kinds of theoretical arguments on the relevance of government level for trust with on the one hand arguments which focus on features of distinct levels of government, and on the other hand arguments in which trust in different governmental levels is related.

<sup>&</sup>lt;sup>11</sup> Available for download on the TiGRE website at <u>https://www.tigre-project.eu/tigre-library/#public-deliverables</u> and on CORDIS at <u>https://cordis.europa.eu/project/id/870722/results</u>



<sup>&</sup>lt;sup>10</sup> This section is based on the analyses and findings of two TiGRE conference papers:

<sup>-</sup> Kappler Moritz, Schomaker Rahel M., Verhoest Koen, Bach Tobias, Maman Libby (2022). Trust assessment of regulatory regime actors into the regulatory agency: a cross-national elite experiment on EU regulation. Presented at EGPA conference 2022 in Lisbon.

<sup>-</sup> the preparatory work for the following TiGRE conference paper (under development): Maggetti, Martino, Trondal Jarle, Verhoest Koen, Dominika Proszowska, Rahel Schomaker (in development). Trust in multilevel relations: testing the congruence and compensation hypothesis in regulatory regimes.

As to the first set of theoretical arguments, one argument is referring to proximity, with citizens trusting government institutions which are proximate to them (Denters 2002; Citrin and Stoker 2018). A second argument is one of identity (Harteveld et al. 2013) theorizing that citizens tend to particularly trust actors and institutions that are perceived as being part of the same system of identity, beliefs and shared values e.g. national actors rather than EU 'alien bureaucrats'. Accordingly, actors and institutions that do not originate within the known system are perceived as being less trustworthy. Following the second set of arguments, trust in different government levels depends upon each other, referring to the congruence and compensation theories on trust in the EU (Muñoz et al., 2011). Both theories agree that trust levels towards EU institutions are extrapolations from trust towards national institutions. Yet, remarkably these theories disagree on the direction of this relationship (Muñoz, 2017). The congruence hypothesis (Muñoz et al., 2011) expects a positive relationship between trust in national institutions and EU institutions. Following literature from cue theory, trust levels towards national institutions provide citizens with limited knowledge on EU issues a cue or a proxy 'on which to form their attitudes towards EU institutions (Persson et al., 2019). The 'compensation' hypothesis – located at the contrary pole – suggests a negative relationship between trust in national and EU institutions. Accordingly, low trust into national actors, citizens tend to trust the European level because "it provides them with alternative source of - potentially better - governance" (Harteveld et al. 2013, 549). The other way around holds up as well.

Both sets of arguments agree that governmental level matters for citizen trust. The arguments for the compensation hypothesis are however more complex and show some kind of interaction effect between governmental level and performance as basis for citizens' trust in regulatory agencies.

But how does this apply to how stakeholders which are part of the regulatory regime (including legislative politicians, ministries and other executive bodies, regulatory intermediaries, regulatees and their interest groups and consumer associations) assess their trust in regulatory agencies? To what extent do stakeholders in a regulatory regime consider the *governmental level* at which a regulatory agency is situated, when assessing the trust(worthiness) of this regulatory agency? Or do they mainly base their trust assessment on a rational evaluation of the performance of that regulatory agency?

We answered this question in two ways. In a first set of analyses, we analyzed the extent to which the stakeholders' assessment of the trustworthiness of the core national regulatory agency in their sector explains the trust they have in the EU-level regulatory bodies active in their sector<sup>12</sup>. More precisely, we analyzed whether perceived trustworthiness of the national regulatory agency and perceived trust of the EU-level regulatory bodies are positively related (i.e. congruence), negatively related (i.e. compensation), or not related at all. The latter might be because stakeholders' trust in agencies is predominantly based on a rational and independent evaluation of the performance of the involved agencies, irrespective of their governmental level.

This first set of regression analyses yields the following findings:

The trust stakeholders have in EU-level bodies indeed relates positively with their perception on the trustworthiness of the national regulatory agency(ies) when controlling for sector, country, as well as the socio-demographic characteristics of the respondents, their general propensity to trust, and their attitude towards governmental regulation on the economy (beta .33, p < .001, adj. R<sup>2</sup> = .14; N = 938). So, the variance of trust in the EU level regulatory bodies can be attributed for 14% to the extent to which stakeholders think their national regulatory agency is trustworthy<sup>13</sup>. To some extent, this points to a dynamic of congruence.

<sup>&</sup>lt;sup>13</sup> This positive relation is even much more pronounced when looking at the extent to which trust in the national regulatory agency explains/predicts the trust in the EU-level regulatory bodies.



<sup>&</sup>lt;sup>12</sup> This is based on the preparatory work for the following TiGRE conference paper (in development): Maggetti, Martino, Trondal Jarle, Verhoest Koen, Dominika Proszowska, Rahel Schomaker. *Trust in multilevel relations: testing the congruence and compensation hypothesis in regulatory regimes.* Please note that the analysis does not focus on the trust of regional-level regulatory agencies in federal countries in the regulatory agencies at national or EU level.

- This congruence dynamic holds to the same extent for regime actors involved in designing, implementing, supervising and enforcing regulations (being legislative politicians, ministries and executive bodies, regulatory intermediaries), as well as private actors (regulatees, their interest groups and consumer associations).
- The extent to which stakeholders are watchful towards their national regulatory agency affects only marginally in a negative way the extent that stakeholders will trust the EU-level regulatory bodies. Even when taking into account the level of watchfulness towards the national regulatory actor, the trustworthiness of the national regulatory agency remains a crucial determinant for trust in EU level regulatory bodies. So, even when stakeholders are strongly watchful towards certain tasks or aspects of their national regulatory agency, the dynamic of congruence still shows between the trust in the EU level regulatory bodies and the perceived trustworthiness of national regulatory body and is only marginally attenuated.
- However, in the data protection sector, the explanatory power of the respondents' assessment of the trustworthiness of the national regulatory agency for the perceived trust in the EU-level bodies is weaker (beta .25, p < .001, R<sup>2</sup> = .07), compared to the finance and food safety sector (beta .33, p < .001, R<sup>2</sup> = .16).
- The dynamic of congruence, in terms of a positive relation between the national regulatory agencies' trustworthiness and the trust in EU level regulatory bodies, is clearly more strongly present for stakeholders in non-EU countries (Israel and Switzerland) (beta .46, p < .001, R<sup>2</sup> = .23), than for stakeholders in EEA countries (including Norway) (beta .29, p < .001, R<sup>2</sup> = .11).

Thus, on the one hand, the analyses show that the extent to which stakeholders assess their national regulatory agency as being trustworthy positively affects their trust in EU-level regulatory bodies, at least to some extent. On the other hand, the findings also suggest that stakeholders take into account the performance of regulatory agencies as well. We arrive at this conclusion based on our observations in a less mature sectors. In such sectors, the dynamic of congruence is weaker than in the more mature sectors, like the finance and food safety sectors. Moreover, the observation that stakeholders in EEA countries (the selected EU countries plus Norway), which have a better view on the functioning of the EU-level regulatory bodies, show this congruence dynamic to a lesser extent, when compared to stakeholders in non-EU countries. After all, these stakeholders have a less clear view on the performance of the EU level bodies and use more cue-based assessments to gauge the trustworthiness of their own regulatory body.

The performance of regulatory agency is relevant in stakeholders' assessment of their trust in an agency, as demonstrated by another piece of evidence from WP2 data (findings reported in D2.2, p.53-56) and further developed in a recent TiGRE paper<sup>14</sup>. The vignette experiment embedded in the WP2 survey allows to analyze whether stakeholders' trust assessment is mainly based on the governmental level on which the regulatory agency functions, or on the agency's performance. Respondents were presented a vignette, which described a hypothetical situation regarding the agency for energy regulation at either the EU level or the national level, showcasing either performance improvement or a continuing low performance. In this vignette experiment, which focuses on trust formation in a sector different from the ones where the respondents are active in, the stakeholders' trust assessments showed not to depend on the governmental level the agency was active in (national or EU). The observed differences in trust assessments based on the governmental level are i) not significant and ii) very small. There are no significant differences in trust levels based on the governmental level of the regulator between the treatment groups. However, in the vignette experiment, differences in stakeholders' trust assessments based on the performance of the regulatory agency are i) significant and ii) relatively large. Looking for interaction effects between governmental level and performance, we find that performance affects trust levels similarly at both levels of governmental level. In addition, the governmental level shows no impact on regulatory actors' trust assessment into both highly and lowly performing regulatory agencies.

<sup>&</sup>lt;sup>14</sup> This is based on the TiGRE paper: Kappler Moritz, Schomaker Rahel M., Verhoest Koen, Bach Tobias, Maman Libby (2022). Trust assessment of regulatory regime actors into the regulatory agency: a cross-national elite experiment on EU regulation. Presented at EGPA conference 2022 in Lisbon.



#### 2.2.3 Conclusion: How do trust and watchfulness relate across different levels of government?

What do both analyses teach us in conjunction about how trust and watchfulness relate across different levels of government, and more precisely, how do the trust and watchfulness towards regulatory actors at the EU level and towards regulatory actors at the national level influence each other? There is clearly a congruence dynamic at work, by which there is a trust transfer mechanism between national regulatory agency and the EU-level bodies, which could even go in both ways. However, that does not mean that stakeholders' trust in EU-level bodies is fully determined by stakeholders' trust in the national regulatory agency (or vice versa). On the contrary, a considerable part of the trust assessment towards national regulatory agencies as well as the EU-level regulatory bodies is determined by the stakeholder's assessment of the agencies' performance. This effect is stronger when sectors are less institutionalized and mature in the sense of being less institutionalized, and function in a less integrated way across the levels of governance, as we have seen for data protection (in comparison to more mature and integrated sectors like the financial sector and food safety sector). Also, for stakeholders within the EU/EEA? (including Norway) the relative performance of the individual regulatory agencies at the different levels of governance influences trust assessment more in comparison to stakeholders in non-EU countries (Israel and Switzerland). Stakeholders in non-EU countries rely more on shorthand cues related to their trust in their national agency in order to form their trust in the more remote - and for them relatively less relevant - EU-level regulatory bodies (as the regulatory regime in their country is not encapsulated in the EU-wide regulatory regime, although it might be inspired by it).

# 2.3 How do interactions among regime stakeholders relate to trust and watchfulness between these actors (RQ1.3)?

Is the level of trust and watchfulness between actors in the regulatory regime related to the level and kind of interaction these actors have with each other, and vice versa? This is the third sub research question we analyze in this section.

#### 2.3.1 Data and methodology

#### 2.3.1.1 Data collection

Table 5 shows the core variables used in WP3. The interaction between stakeholders in regulatory regimes is measured using three core variables: the frequency of contact, the occurrence of sending information and receiving information, and the extent to which views are considered to be similar or different between a pair of actors. Trust and distrust are measured in a similar way as in WP2 using a trust measure and a watchfulness measure. For more justification of the definition and the operationalization of these concepts, please see (Bach et al. 2022). These core variables compose the basic quantitative variables which were collected in all 18 sectors (i.e. the three regulatory regimes in six countries) through, among others, the online social network questionnaires that are central in the sector reports. We discuss the collection of these different sets of core-variables for WP3 in more detail in this section. Please see D3.1 for even more information about data collection, variable construction and ethical considerations in the sector studies.

The data collection in WP3 consists of two consecutive parts: the online social network analysis (SNA) questionnaire and the in-depth expert interviews. Both elements focused on specific actor groups, namely national regulatory agencies, regional regulatory agencies, ministries and executive bodies, legislative politicians, regulatory intermediaries, regulatees, interest groups representing regulatees, and consumer associations. The mapping of respondents was largely based on the organizational mapping exercise of T1.3 of the TiGRE project (see D1.3<sup>15</sup>) as well as of the WP2 survey. This ensured consistency of the interviewed actors and safeguarded that the various researchers identified those actors that play a central role in the

<sup>&</sup>lt;sup>15</sup> Available for download on the TiGRE website at <u>https://www.tigre-project.eu/tigre-library/#public-deliverables</u> and on CORDIS at <u>https://cordis.europa.eu/project/id/870722/results</u>



regulatory regime. For the exact instructions for the selection of participants for the online questionnaire and interviews, please see Annex A. The country teams were asked to select ten to twelve respondents of different organizations corresponding to different actor types per sector to conduct the social network questionnaires and interviews, with the respondents being asked questions of how their organization relate to other actors in the regulatory regime. The organizations which have been selected ought to be considered representative for their actor type.

Variable	Data source		Question	Scales
Frequency of contact (contact)	SNA (WP3)	Questionnaire	Please estimate how often your organization has contact with the following organizations in the context of [sector].	5-point scale (several times per week – not at all)
Information sending (infosend)	SNA (WP3)	Questionnaire	Looking at the past 12 months, from whom did your organization receive information and to whom did your organization give information in relation to [sector]?	Not at all – Yes, because we have to – Yes, because we want to (voluntary)
Information receiving (inforeceived)	SNA (WP3)	Questionnaire		No, we did not receive any information – Yes, we receive information
Similarity or difference in views on regulatory issues (Views)	SNA (WP3)	questionnaire	In your perception, which organizations have in general different or similar views/opinions to that of your own organization when it comes to the regulation of [sector]?	5-point scale (mostly different views – mostly similar views)
Trust in the other actor (trust)	WP2 su SNA (WP3)	rvey and questionnaire	Based on your experience in your organization: How much trust do you have in each of the following organizations?	11-point scale (No trust at all – Complete trust)
Watchfulness towards the other actor (watchfulness)	WP2 su SNA (WP3)	rvey and questionnaire	Based on your experience in your organization: Should your organization be watchful that the following institutions' actions impact your organization in a negative way?	11-point scale (Not watchful at all – very watchful)

Table 5: Variables and data collected in WP3 (T3.2)

This standardized approach with respect to the selection of participants from representative organizations for the interviews and questionnaires ensures that, in each of the 18 studied sectors, data is collected about the relation of all basic actor types with the other actor types (being national regulatory agencies, regional regulatory agencies, ministries and executive bodies, legislative politicians, regulatory intermediaries, regulatees, interest groups representing regulatees and consumer associations). This also ensures that the 18 sectors are comparable both in terms of the data collected, the analytical approach and the quality of the insights gathered.

The respondents participating in the survey were carefully selected based on several criteria. Please see TiGRE deliverable D3.1 for more information and justification of the sampling strategy. When agreeing to participate in the interviews, the selected respondents were asked to partake in a short online social network questionnaire. This SNA questionnaire, hosted in Qualtrics, quantitatively gauged the interactions and



relations the respondents' organization have with other actors in the field. These questionnaires were country and sector specific as different actors are active in different country-sector regimes. This means that different actors within the same sector and country received the same questionnaire, but that actors in different sectors or different countries received different questionnaires. These different questionnaires were needed as the active actors differ per sector and per country.

More specifically, in the first three questions, a number of specific actors were listed, namely:

- a specifically named regulatory agency (in case a second national regulatory agency is present in that sector, this regulatory agency was also named, likewise in case of a regional regulatory agency);
- one or two specifically named European relevant regulatory bodies;
- a specifically named relevant ministry or executive body.

Besides these specific (and named) actors, we also asked respondents about their relations with general actor groups, namely:

- 'a specific politician in national parliament deciding upon data protection legislation, like e.g. the chairman of the involved parliamentary committee';
- 'a specific certification and accreditation body working with data protection';
- 'a specific [regulatee] working in [sub-sector] as a regulated organization';
- 'specific interest group representing [regulatee of a subsector], which need to comply with [sector] regulation';
- 'a specific consumer association defending the interests of citizens with respect to [sector] regulation'.

For regulatees and interest groups, we included both types of actors for each of the two sub-sectors. The generic answer categories allow respondents to generally consider their contacts with legislative politicians, regulatees, interest groups and consumer associations. Yet, to make sure we captured information about relevant interactions with these actor groups, we explicitly asked the respondent to think about 'the most representative or typical organization' when answering the questions. We also included a sector/country specific example of a typical organization of specific actor types (interest groups and consumer organizations) to ensure that respondents had a good grasp of the right type of organization when reviewing their interactions. D3.1 describes the data collection, items and kind of data in more detail.

#### 2.3.1.2 Analyses

The analyses presented below first focus on specific forms of interaction between actors (contacts, information sharing, and having similar or different views) and their relation with trust- and watchfulnesslevels. Per form of interaction, we present different regression models in which we focus on specific types of actors. First, we always present a general model including all actors. Next, we first present different models that only include public actors. With public actors we refer to all public actors in the regulatory regime, namely regulatory agencies, ministries and executive bodies, legislative politicians, and regulatory intermediaries. We also present separate models for the private actors, namely regulatees, interest organizations and consumers. Next, as we deal with directional social network data, our analyses also distinguish between sending and receiving actors. In short, this means that actors can either be the one that trusts (or is watchful towards) other actors (sending) or be the one that other actors trust (or are watchful towards) (receiving). Consequently, we present different models that include different directional approaches. The analyses below are structured according to the following structure:

- Model studying the relation of interactions with trust and watchfulness in general (by all actors);
- Model analyzing the relation of interactions with public actors' trust and watchfulness;
- Model analyzing the relation of interactions with private actors' trust and watchfulness;
- Model analyzing the relation of interactions with trust in and watchfulness towards public actors;
- Model analyzing the relation of interactions with trust in and watchfulness towards private actors;
- Model analyzing the relation of interactions with trust in and watchfulness towards regulatory agencies.

We repeat this structure for all interactions (contact, information sending, information receiving and views) separately, and also present a regression model in which all interactions are included.



In all models presented below, we control for the sector (data protection, food safety and finance) and country (Belgium, Germany, Norway, Poland, Spain, Switzerland). We do this as all collected data is situated in a specific network, for example in the network of Belgian data protection. Controlling for sector and country thus allows us to better understand the (individual) effects of our independent variables. When controlling for sector and country, we use Norway and the financial sector as reference categories due to the (relatively) high trust in these countries (also see TiGRE deliverable D1.2<sup>16</sup>). The control variables of sector and country are often significant in the analyses presented below, thus indicating the intra-sector and intra-country differences in base levels of trust and watchfulness.

## 2.3.2 Findings: to what extent do (frequent) contacts between actors in regulatory regimes relate to trust between actors?

Modeling the frequency of contacts in relation to trust between all actors in the studied regulatory regimes, one sees that having frequent contacts (more than once per year or more) indeed positively related with trust, compared to having no contacts at all ( $R^2 = .09$ , F(11, 1303) = 12.2, p < .001). Interestingly, we see stronger correlations with higher frequency of contacts. We also note that having low frequency contacts (one or less times per year) does not relate to trust levels between actors compared to having no contact at all. We can thus conclude that high frequency contacts (more than once per month or more) do indeed positively relate with trust levels between actors in regulatory regimes. This might indicate that there is a certain threshold in terms of contacts: when actors have contact on a frequent basis, the trust between these actors is also higher.

In a second model, we analyze to what extent the trust of public actors towards other actors correlates with the contacts they have with those other actors in the regulatory regime. Public actors refer to regulatory agencies, ministries and executive bodies, legislative politicians, and regulatory intermediaries. Here, we again see that high frequency contacts, namely having contacts more than once per month, indeed relates to higher trust ( $R^2 = .15$ , F(11, 534) = 8.6, p < .001).

Looking at the extent of which the trust of private actors towards other actors correlates with their contacts, we see that having contacts increases trust significantly. Interestingly, the results highlight that private actors' trust does not distinguish between high or low frequency of contacts. In other words, compared to having no contact at all, having contacts increases private actors' trust in other actors. We do see stronger correlations with higher frequency of contacts (ranging from b = .37 to b = 1.78). That said, the model fit is not as high as for the other analyses ( $R^2 = .1$ , F(11, 757) = 7.62, p < .001).

In the fourth model, we analyze to what extent actors' trust in public actors relates with the contacts they have with one another. In this model ( $R^2 = .14$ , F(11, 362) = 5.48, p < .001), we see that having contacts more than once per year and more positively relates with trust, compared to having no contacts with public actors at all. Only having contacts once time per year or less, compared to having no contacts at all, does correlate with higher levels of trust. This means that actors' trust in public actors, again, goes together with having frequent contacts.

Turning to actors' trust in private actors, we see a similar pattern. Again, we see that having contacts one or more times per year correlates with a higher trust in private actors, compared to having no contacts with these actors ( $R^2 = .11$ , F(11, 929) = 9.94, p < .001).

Lastly, we focus on the relation between frequency of contacts and trust in the regulatory agencies in each of the studied regulatory regimes ( $R^2 = .19$ , F(11, 137) = 2.95, p = .002). In this regard, we find that actors that have frequent contact with the regulatory agency, also tend to trust the agency more. The correlation is relatively strong (once per month or more: b = .99, p = .020; more than once per week: b = 1.12, p = .015).

<sup>&</sup>lt;sup>16</sup> Available for download on the TiGRE website at <u>https://www.tigre-project.eu/tigre-library/#public-deliverables</u> and on CORDIS at <u>https://cordis.europa.eu/project/id/870722/results</u>



**Takeaway**: Across the various models, we find that having contacts, and in particular having high frequency contacts, positively relates with trust levels. Especially actors that have contact on a monthly or weekly basis tend to trust the other actors in the regime, be it private or public actors, more.

## **2.3.3** Findings: To what extent does sending information between actors in regulatory regimes relate to trust between actors?

Looking at information sending between all actors first, we see that, in general, sending information to actors is positively correlated with the levels of trust, compared to not sending information at all ( $R^2 = .06$ , F(9, 1257) = 8.68, p < .001). Interestingly, our results indicate correlation between mandatory information sending and trust is stronger (b = .730, p < .001) than the effect size of voluntary information sending (b = .319, p < .001).

In the model that analyses to what extent the trust of public actors towards other actors is determined by sending information to these actors, we see find no relation. Both mandatory and voluntary information sending does not contribute or hamper public actors' trust in other actors in the regulatory regime ( $R^2 = .12$ , F(9, 523) = 8.50, p < .001).

Private actors' trust towards other actors, on the contrary, is determined on the information they send to these actors ( $R^2 = .06$ , F(9, 724) = 5.12, p < .001). Interestingly, the correlation between mandatory information sending and trust (b = 1.20, p < .001) is twice as strong as for voluntary information sending (b = .53, p < .001). A possible explanation might be that private actors are often only mandated to send information to their respective interest groups, and less to public actors. Not surprisingly, the trust between regulatees and interest groups is generally quite high.

Next, we focus on the extent to which actors' trust in public actors correlates with the information they send to these actors. Our results show mandatory information sending positively relates with actors' trust in public actors, compared to not sending information at all ( $R^2 = .12$ , F(9, 356) = 5.34, p < .001). Interestingly, we do not find such results for voluntary information sending.

For trust in private actors, we see that information sending, both mandatory and voluntary, relates to higher trust levels ( $R^2 = .07$ , F(9, 891) = 7.04, p < .001). In other words, the trust in private actors indeed corresponds with regime actors sending information to private actors. Interestingly, the correlation of mandatory information sending (b = .80, p < .001) is stronger than of voluntary information sending (b = .41, p < .001).

Next, we turn to the relation between information sending and trust in agencies. We find that whether actors send information to regulatory agencies, does not seem to correlate with their trust in the regulatory agencies, as we did not find any significant results.

**Takeaway**: Across the models, we find consistent evidence that information sending positively correlate with higher trust levels between actors (both public and private actors). Especially interesting is that we consistently find that mandated interactions (namely obligations to send information to specific actors) correlate with higher trust levels than voluntary information sending.

## 2.3.4 Findings: To what extent does receiving information between actors in regulatory regimes relate to trust between actors?

Looking at information receiving among all actors, we find a positive correlation: receiving information from other actors corresponds with higher trust levels in those actors compared to not receiving information ( $R^2 = .07$ , F(8, 1247) = 11.6, p < .001). We thus see that information sharing positively correlates with actors' trust levels.



Focusing on public actors' trust in other actors (i.e. regulatory agencies, ministries and executive bodies, legislative politicians, and regulatory intermediaries), we also find a positive relation (b = .53, p < .001) compared to not receiving information. This means that public actors' trust is higher when actors receive information from other actors in the regime ( $R^2 = .15$ , F(8, 572) = 11.7, p < .001).

Doing the same but for private actors' trust, we find a similar result. Also private actors' trust is higher when private actors receive information from other actors (b = .66, p < .001). Yet, the model fit is worse than for the public actors discussed above, as it only explains around 6% of the variation in the data ( $R^2$  = .06, F(8, 706) = 4,58, p < .001).

The trust in public actors, as reported in the survey data, also increases when actors in the regime receive information from public actors ( $R^2 = .14$ , F(8, 349) = 6.88, p < .001). This might indicate that when public actors are more open towards other actors in the regime (e.g. by sending information to these actors), the actors are more inclined to trust the public actor.

This also applies to trust in private actors. Our findings highlight that, similar to trust in public actors, the trust in private actors is higher when actors receive information from private actors. Yet, the model fit is relatively low compared to the other analyses presented above ( $R^2 = .08$ , F(8, 884) = 9.50, p < .001).

Similar to information sending, we find that receiving information from the agency does not relate with higher trust levels towards that agency.

**Takeaway**: Although we find consistent evidence that receiving information from actors also increases trust in those actors, we must be critical with these results. Only a small portion of the variation in the data can be explained by receiving information, especially in the models estimating the relations on trust in public and private actors.

## 2.3.5 Findings: To what extent does convergence or divergence of views between actors in regulatory regimes relate to trust between actors?

Whereas the regression analyses on contacts and information sharing are quite intuitive, the analyses focusing on the divergence or convergence of views deserves more explanation. First, including all actors in the analyses, we notice that having mostly similar or often similar views indeed positively relates with trust levels between actors, when compared to having sometimes similar and sometimes different views ( $R^2 = .13$ , F(12, 1269) = 16.3, p < .001). Surprisingly, we also see a positive relation between having mostly different views and trust, meaning that actors that reported to have mostly different views also reported higher trust levels. Interestingly, this effect size (b = 1.02, p = .001) is higher than the effect size for having often similar views (b = .69, p < .001). We did not find a significant effect for often having different views. That said, the correlation between having mostly similar views and trust is the highest (b = 1.30, p < .001).

When only focusing on how the trust of public actors in other actors correlates with convergence and divergence of their views, we see similar results ( $R^2 = .18$ , F(12, 552) = 9.85, p < .001). First, having often similar views (b = .62, p < .001) or mostly similar views (b = .87, p < .001) positively relates to the trust of public actors. As demonstrated above, also having mostly different views contributes to higher trust of public actors (b = 1.12, p = .001). Interestingly, having mostly different views contributes more to trust levels than having mostly similar views. These findings might hint at a certain familiarity between actors, which might act as a confounder. If actors are familiar with one another, they know whether their viewpoints compliment or contradict one another. This familiarity might shape to what extent these actors trust each other, rather than the convergence or divergence of their views perse. In this sense, the results on contacts might be more robust (also see discussion below).

Now focusing on private actors (such as regulatees, interest organizations and consumer organizations), we again find that the convergence of views is significantly related to trust levels of these private actors towards



other actors in the regime. Again, we find that having often similar views and having mostly similar views positively relate to the trust levels of private actors. Here, the effect size of having mostly similar views is highest (b = 1.6, p < .001). Also, having mostly different views has a positive effect on trust levels, significant at  $\alpha$  = 0.05.

Having discussed convergence and divergence of view in relation with trust levels of public and private actors, we now turn to the question to what extent trust *in* public and private actors correlates with convergence or divergence of views. First focusing on the trust in public actors, our analysis highlights that actors having often similar (b = .62, p = .005) or mostly similar (b = 1.06, p > .001) views with public actors also report to have more trust in those actors, compared to having sometimes similar and sometimes different views ( $R^2 = .2$ , F(12, 355) = 7.18, p < .001). We also identify a positive relation between having often different views on trust in public actors and trust levels (b = .58, p = .030). Having mostly different views does not yield a significant effect on trust levels.

Turning to the trust in private actors, our findings show that having often and mostly similar views positively relate with trust in private actors, compared to having sometimes similar and sometimes different views ( $R^2 = .14$ , F(12, 928) = 12,6, p < .001). Here, the correlation between having mostly similar views and trust is stronger (b = 1.33, p > .001) than for having often similar views (b = .70, p > .001). As we have seen in the analyses above, also having mostly different views positively relates to trust in private actors, and even has a stronger correlation than having mostly similar views (b = 1.44, p < .001). This finding again hints at familiarity between actors as an important determinant of trust.

Finally, we assess the extent to which view convergence and divergence affect trust in the regulatory agency specifically. In the model ( $R^2 = .18$ , F(11, 136) = 2.53, p < .005), we find that actors having often similar views with the regulatory agency also have higher trust in the agency (b = .70, p = .026). Yet, this relation does not exist for actors that have mostly different views, or for having different views.

**Takeaway**: Across the various models, we repeatedly find that actors that have similar views also tend to trust one another more. We also find that having mostly different views also goes together with higher trust levels. This is interesting as it shows that having different views might not be as detrimental to trust as previously assumed and can even increase trust in some cases.

## 2.3.6 Findings: To what extent do contacts, information sharing, and convergence of views between actors in regulatory regimes relate to trust between actors?

The following analyses will combine all the interactions in one regression analysis, as to understand how interactions in general relate with trust levels. Again, we make a distinction between trust of all actors, trust of public actors, trust of private actors, trust in public actors and trust in private actors.

Looking at the trust levels of all actors, we first see that the significant correlations of information sharing, both sending and receiving information, disappeared. Instead, the correlations of having high frequency contacts and having mostly similar or having mostly different views remain significant. Interestingly, in contrast with the separate contact model as presented above, this model highlights that only having contacts more than once per month or more positively correlates with trust (once per month: b = .54, p = .004; once per week: b = .67, p = .004), compared to actors having no contacts at all. Looking at the convergence and divergence of views between actors, we see similar results as in the views model presented above. Having often or mostly similar views, but also having mostly different views positively relates with actors' trust levels, all compared to having sometimes similar and sometimes different views. We found the strongest correlation between having mostly similar views and trust levels (b = 1.17, p < .001). The model including all independent variables explains about 16% of the observed variation in trust levels ( $R^2 = .16$ , F(19, 1175) = 11.8, p < .001).



Focusing on the trust of public actors in other actors in the regime, most correlations we presented in the separate analyses have disappeared ( $R^2 = .24$ , F(19, 485) = 8.01, p < .001). Contrary to previous findings, having frequent contacts does not correlate with higher trust levels of public actors. Instead, we find that having contact one time per year or less negatively relates with actors' trust levels (b = -.44, p = .044). We also find that sending information corresponds with lower trust levels, both when sending information mandatorily (b = -.61, p = .010), or voluntarily (b = -.55, p = .007). We do find a positive relation between view convergence and the trust of public actors, Specifically, we find that public actors tend to have higher trust in actors that have either often similar (b = .59, p = .002) or mostly similar views (b = .80, p < .001).

The trust of private actors first highlights that private actors' trust in other actors in the regime positively correlates with high frequency contacts (monthly: b = .79, p = .005; weekly: b = .93, p = .005), as our analyses shows ( $R^2 = .19$ , F(19, 650) = 7.85, p < .001). We also find that private actors' trust tends to be higher in actors that they (mandatorily) have send information to (b = .62, p = .025). Looking at the convergence and divergence of actors' views, we again find that similar views indeed positively relate to higher trust levels as indicated by private actors (often: b = .56, p = .007; mostly: b = 1.42, p < .001). The rather strong correlation between having mostly similar views indicates and private actors' trust levels shows that private actors' trust is indeed based on convergence of their views with other actors.

Next, turning to the trust in public actors, we again find that high frequency contacts are important. We find that having often similar (b = .83, p = .018) and mostly similar (b = 1.01, p = .011) contacts relates with higher trust towards public actors. Looking at information sending, we see that sending information voluntarily (b = -.61, p = .019) negatively affects trust in public actors. Receiving information from public actors does not affect actors' trust in public actors. In terms of views, we again find positive significant relations between having similar views and trust (often: b = .60, p = .010, mostly: b = 1.10, p < .001). We also find that having often different views positively affects trust towards public actors (b = .57, p = .037). Even though we find some contradicting findings, the model explains about 24% of the variation in the data and is thus a rather robust model (R<sup>2</sup> = .24, F(19, 321) = 5.38, p < .001).

Turning to trust levels in private actors, we find that contacts are, as also found previously, important. Here, we find that having high frequency contacts positively relates with trust in private actors (monthly: b = .49, p = .043; weekly: b = .56, p = .045). We do not find significant effects on trust towards private actors in relation to information sharing practices. We do find, however, that having similar views or having mostly different views positively correlates with trust levels in private actors. The model is moderately robust, explaining around 17% of the variation ( $R^2 = .17$ , F(19, 834) = 8.81, p < .001)

Lastly, focusing on trust in regulatory agencies fit ( $R^2 = .32$ , F(19, 125) = 3.06, p < .001)<sup>17</sup>, we again see the importance of high frequency contacts. Having contact more than once per month (b = 1.58, p = .002) or once per week or more (b = 1.49, p= .005) significantly relates with trust in regulatory agencies. Interestingly, these high frequency contacts strongly correlate with trust levels in agencies. Actors that send information to agencies do not trust these agencies more. Moreover, the studied actors tend to trust agencies less if they receive information from the agencies (b = -.98, p = .017). In terms of views, we see that actors that have often similar or often different views tend to trust the agency more (often similar: b = .95, p = .003; often different: b = .72, p = .048). We do not find such effects for having mostly different or mostly similar views, however.

 $<sup>^{17}</sup>$  The total number of relations included in this analysis is rather low (n = 126) related to the number of variables tested. Hence, the results in this model should be interpreted keeping this in mind.



**Takeaway**: As we have seen in the separate models, contacts, information sending, information receiving and having similar or mostly different views positively affected trust. When including all variables in the models, two main relations remain significant: high frequency contact between actors and view convergence and divergence. Having high frequency contacts indeed corresponds with higher trust levels. Moreover, having similar views, or having mostly different views also correlate with higher trust levels. We found mixed evidence concerning information sharing practices, but it seems that public actors' trust in other actors is somewhat related to actors sending information to other actors.

### 2.3.7 Findings: To what extent do (frequent) contacts between actors in regulatory regimes relate to watchfulness between actors?

The models presented above are now repeated but now model the relations between actor interactions and reported watchfulness values. Focusing on the relation between contacts and watchfulness, the first model shows that having contact once or less times per year (significant at  $\alpha = 0.05$ ), having contact more than once per year (significant at  $\alpha = 0.01$ ), and having contacts more than once per month (significant at  $\alpha = 0.05$ ) all positively relate to having higher watchfulness levels, when compared to having no contact at all (R<sup>2</sup> = .13, F(11, 1279) = 17.2, p < .001). This is surprising, as we have seen in the trust analyses that having high frequency contacts corresponds with higher trust levels. This finding might thus demonstrate that trust and watchfulness are not mutually exclusive concepts. Moreover, this finding might also point towards the expectation that high trust also corresponds with higher watchfulness, as actors are aware of the impacts of other actors' behavior (watchfully trusting). At the same time, we did not find similar results for the relations between weekly contacts and watchfulness levels.

Now focusing on the relation between contacts and the trust public actors (regulatory agencies, ministries and executive bodies, legislative politicians and regulatory intermediaries) have in other actors, we find that having any contacts with other actors positively correlates with public actors' watchfulness levels, when compared to having no contacts at all ( $R^2 = .22$ , F(11, 533) = 14, p < .001). Here, the correlation between having monthly contacts and trust is strongest (b = 1.31, p > .001), followed by having weekly contacts, having contacts once or more times per year and having contacts one time per year or less. This might indicate that the more contacts public actors have with actors in the regulatory regime, the more aware they become of the impact these organizations might have on their own organizations. This might particularly apply to private actors (regulatees, interest organizations, consumer organizations). The actors with which public actors have weekly contacts with, are also likely to be public actors themselves (e.g. ministries having weekly contacts with regulatory agencies), thus slightly limiting watchfulness levels.

Comparing these results to the analysis of private actors' watchfulness towards other actors ( $R^2 = .12$ , F(11, 734) = 9.44, p < .001), we see that having low frequency contacts (once per year or less, and yearly contacts) significantly correlates with higher watchfulness levels (resp. b = .48, p = .050; b = .60, p = .009). Having contacts on a monthly or even weekly basis does not relate with watchfulness levels.

We find little significant relations between contacts and watchfulness towards public actors ( $R^2 = .29$ , F(11, 362) = 13.2, p < .001). Only having weekly contacts decreases the watchfulness in public actors, compared to not having contacts at all (b = .67, p = .033).

Similarly, we do not find any significant correlations between contacts and trust in private actors.

The watchfulness towards regulatory agencies can also not be explained by variation in terms of (frequency of) contacts, as we do not find a significant relation.



**Takeaway**: Compared to our finding on trust, we find more spurious effects across the different models estimating the determinants of watchfulness. Including all actors in the analyses, we find that frequent contacts increase watchfulness. Also the watchfulness levels indicated by public actors seem to be partially based on the contacts they have with other actors. Interestingly, the watchfulness towards private or public actors, or the regulatory agency specifically, all do not relate with higher frequency of contact between actors.

### **2.3.8** Findings: To what extent does sending information to actors in regulatory regimes relate to watchfulness between actors?

Turning to information sharing between actors, the model highlights that the sending of information correlates with higher levels of watchfulness between actors ( $R^2 = .13$ , F(9, 1231) = 20.7, p < .001). More specifically, the model demonstrates that watchfulness especially increases when actors share information mandatorily, compared to not sending information at all (b = .69, p < .001). Also when actors send information voluntarily, watchfulness tend to be higher as well (b = .27, p = .001). These results also demonstrate that trust and watchfulness are different concepts, which can exist alongside one another. A possible explanation of why information sharing leads to higher levels of watchfulness is that actors recognize the importance of actors they send information too. This importance might lie in the fact that the behavior of those actors can have an impact on the own organizations of the respondents, thus increasing watchfulness.

Focusing on to what extent public actors (i.e. agencies, ministries and executive bodies and regulatory intermediaries) are watchful towards other actors, we find that both mandatory and voluntary sending of information relates to higher levels of watchfulness ( $R^2 = .24$ , F(9, 520) = 17.8, p < .001). Mandatory information sending has a stronger correlation to higher watchfulness levels than voluntary information sending. This might hint at the fact that if public actors must send information to other actors, these actors indeed might have an impact on the public actor's organization. Logically, public actors are mainly mandated to send information to other public actors, such as ministries or parliament. These institutions indeed have the power to sanction (or reward) other public actors in the regulatory regime, thus increasing their watchfulness.

Mandatory information sending also positively relates with private actors' watchfulness towards other actors in the regime ( $R^2$  = .12, F(10.3, 701) = 10.3, p < .001). We do not find significant correlations of voluntary information sending.

The analysis estimating the correlations between information sending and actors' watchfulness towards public actors yields no significant results. We can thus conclude that watchfulness towards these actors does not relate to sending information.

Contrarily, the analysis on watchfulness towards private actors shows that sending information in a mandatory fashion to private actors indeed correlates with higher watchfulness levels towards these actors (b = .57, p = .031). The model ( $R^2$  = .12, F(11, 865) = 13.2, p < .001) does not find similar evidence for voluntary information sending.

Focusing on the watchfulness towards regulatory agencies, we do not find evidence that actors base their watchfulness towards agencies on whether they send information to these agencies.



**Takeaway**: Across some of the models, we find that information sending corresponds with higher watchfulness levels. It seems that the public actors are especially more watchful towards actors to whom they send information. For private actors, we only see this correlation when they must send information. Again, we do not find evidence that the watchfulness towards agencies relates with actors sending information to the agencies.

## **2.3.9** Findings: To what extent does receiving information from actors in regulatory regimes relate to watchfulness between actors?

Besides information sending, we also modelled to what extent receiving information affects watchfulness levels between (different sets of) actors. If we consider all actors, we see that receiving information also corresponds with higher levels of watchfulness, when compared to not receiving information at all ( $R^2 = .13$ , F(8, 1221) = 22.9, p < .001). This is rather surprising as one might expect the opposite.

The watchfulness levels reported by public actors (regulatory agencies, ministries and executive bodies, legislative politicians, regulatory intermediaries) also tend to increase when public actors receive information from other actors in the regime (b = .93, p < .001). The model is rather robust and explains about 23% of the observed variation ( $R^2$  = .23, F(8, 526) = 20, p < .001).

We also find that the reported watchfulness levels of private actors tend to be higher when they received information from other actors in the regime ( $R^2 = .12$ , F(8, 686) = 11.2, p < .001). This correlation is stronger compared to the public actors (b = .42, p = .021), indicating that public actors' watchfulness levels tend to correlate with receiving information.

We do not find evidence for any relation between sending information and the watchfulness towards public actors or towards private actors. In other words, receiving information from private or public actors does not relate with actors' perceptions on how impactful these actors can be on their own organization.

As we have seen with contacts and sending information, we also did not find any evidence of the relation between receiving information from agencies and actors' watchfulness towards them.

**Takeaway**: We find that public and private actors' watchfulness towards other actors in the regime increases if they receive information from those actors. Yet, watchfulness towards public and private actors, and agencies specifically, does not correspond with actors receiving information from these actors. This shows that receiving information might be linked to a certain closeness of actors (the closer actors are with one another the more likely they exchange information) relates with higher watchfulness levels rather than receiving information itself.

## **2.3.10** Findings: To what extent does convergence or divergence of views between actors in regulatory regimes relate to watchfulness between actors?

Modeling view convergence and divergence in relation to watchfulness levels, we find two significant relations ( $R^2 = .16$ , F(12, 1271) = 19.7, p < .001). First, and not surprisingly, having mostly similar views with other actors corresponds with lower watchfulness levels towards those actors, when compared to having sometimes similar and sometimes different views (b = -.69, p < .001). Second, having mostly different views also corresponds with lower watchfulness levels (b = -.94, p = .04). The second finding is rather counter-intuitive but does correspond with our findings on the relation between divergence of views and trust (see above).



Focusing on the reported watchfulness levels of public actors, we do not find any significant relation between views of actors and the watchfulness levels.

We do find significant correlations between convergent views in relation to private actors' reported watchfulness ( $R^2 = .17$ , F(12, 708) = 12.1, p < .001). Specifically, we find that private actors' watchfulness tends to be lower if they mostly have similar views as other actors (b = -1.23, p < .001). Their watchfulness levels also are lower if they have mostly different views (b = -1.60, p = .006). Again, this might point towards the familiarity between actors as main driver of trust and watchfulness.

The watchfulness towards public actors does not correlate with the convergence or divergence between actors in the regime, as we do not find any significant relations between these two variables.

The watchfulness towards private actors, however, does relate to some extent with actors' views ( $R^2 = .16$ , F(12, 903) = 14, p < .001). First, we find that having mostly similar views with private actors, tends to correspond with lower watchfulness towards private actors (b = -.87, p = .001). This supports the idea that actors with similar views are less watchful towards one another. Following this logic, we also find that having often different views corresponds with higher watchfulness levels towards private actors (b = .77, p = .018). However, we also find that having mostly different views with private actors relates to lower watchfulness towards these actors (b = -1.05, p = .022). Although this finding is counter-intuitive, it seems to be a recurring finding across some of the presented analyses above.

Again, we did not find a significant relation between the watchfulness towards agencies and the convergence or divergence of views.

**Takeaway**: Although not consistent across all models, we do find some evidence that actors' watchfulness relates to the convergence or divergence of views. We specifically find that private actors tend to be more watchful towards actors that have mostly similar or mostly different views. Although these findings might be counter-intuitive, they correspond with our previous findings on trust.

## 2.3.11 Findings: To what extent do contacts, information sharing and convergence of views between actors in regulatory regimes relate to watchfulness between actors?

Combining the various independent variables into one model, a lot of the significant results we found in the individual models vanish. We do not find significant correlations between contacts and information sharing (both sending and receiving information) in relation to watchfulness levels. We do find two correlations between views and watchfulness. As also found in the individual model, having mostly similar views indeed tends to correspond with lower watchfulness levels compared to having sometimes similar or sometimes different views (b = -.76, p = .001). At the same time, often different views between actors positively relates to higher watchfulness levels (b = .55, p = .03). Although these findings follow our expectation stating that having different views with an actor might corresponds with higher watchfulness towards that actor, we did not find a similar significant result for having mostly different views with an actor. The combined model explains around 16% of variation in the data (R<sup>2</sup> = .16, F(19, 1155) = 11.3, p < .001).

Analyzing to what extent the different studied interactions correlate with public actors' reported watchfulness levels towards other actors ( $R^2 = .24$ , F(19, 485) = 8.01, p < .001), we first find that having contact one time per year or less corresponds with lower watchfulness levels (b = -.44, p = .044). For more frequent contacts we do not find significant relations. This is surprising as our previous analyses have demonstrated the importance of high frequency contacts in regulatory regimes. Regarding information sharing, we find that reported watchfulness levels of public actors are negatively correlated with mandatory (b = -.61, p = .010) and voluntary information sending (b = -.55, p = .007). This shows that public actors' watchfulness levels towards other actors tend to be lower when they send information to these actors. Interestingly, we find a relatively strong correlation between public actors' watchfulness levels and receiving



information. Specifically, watchfulness increases if public actors receive information from other actors in the regulatory regime (b = 1.01, p < .001). This is the strongest correlation in the analysis. Lastly, focusing on the views of public actors and the effects they have on public actors' watchfulness, we see that having mostly similar views, often similar views, and mostly different views positively relates with public actors' watchfulness.

Next, we focus on the effects of the studied interactions on the watchfulness levels reported by private actors. First, we find that high frequency contacts (monthly or weekly) significantly relate to higher watchfulness levels of private actors (resp. b = .79, p = .005; b = .93 p = .005), when compared to having no contact at all. We also find that when private actors send information to other actors in a mandatory fashion, their watchfulness levels tend to increase (b = .62, p = .025). Both these findings contradict what one might expect. Moreover, as we find similar findings for trust, we can again conclude that trust and watchfulness are not mutually exclusive and might even complement one another. We do not find significant correlations between receiving information and private actors' watchfulness. Lastly, we find that having often (b = .56, p = .007) and mostly similar (b = 1.42, p > .001) views positively relates to the watchfulness levels of private actors. This is rather surprising, but corresponds with our finding concerning trust, namely that having similar views negatively relates with trust levels of private actors.

Analyzing what interactions correlate with watchfulness towards public actors ( $R^2 = .24$ , F(19, 321) = 5.38, p < .001), we first find that high frequency contacts correspond with higher watchfulness levels. The positive relation of having frequent contacts is rather high, especially for having weekly contacts (monthly: b = .83, p = .018; weekly: b = 1.01, p = .011). This shows that actors that have frequent contacts with public actors, also tend to be more watchful. This might be explained by the fact that actors have frequent contacts with one another if they deal with the same issues or have legal obligations to interact with one another. This automatically increases the likelihood that the behavior of a public actors might affect the other actors' organization, thus increasing watchfulness. Besides contact, we find a negative relation between the watchfulness towards public actors tends to be lower when actors must send information to them. Receiving information does not relate with watchfulness towards public actors. Turning to views, we find that having convergent views, both often similar and mostly similar, positively relates with watchfulness. Here, especially the correlation between having mostly similar views and watchfulness is strong (b = 1.1, p > .001)

Finally, turning to the watchfulness towards private actors ( $R^2 = .17$ , F(19, 834) = 8.81, p < .001), we again see that high frequency contacts relates with higher watchfulness levels. Specifically, having contacts monthly or weekly, correspond with higher levels of watchfulness (respectively b = .49, p = .043; b = .56, p = .045). One might have a similar explanation for this phenomenon as discussed above. Watchfulness towards private actors does not correlate with sending information to, nor with receiving information from private actors. In terms of views, we again see that having often similar or mostly similar views, watchfulness levels tend to be higher. Having mostly similar views strongly relates with higher watchfulness towards private actors (b = 1.19, p < .001). However, this is not the strongest correlation we find. Having mostly different views also corresponds with higher watchfulness levels towards private actors (b = 1.34, p = .001).

Based on the models estimating the effects of various interactions on watchfulness towards agencies individually, we did not find any significant relations. The model combining all variables, however, does result in some significant correlations. First, we find that frequent contacts with regulatory agencies corresponds with lower watchfulness levels actors report for agencies. Specifically, we find that actors that have contact more than once per month (b = -1.37, p = .027) and actors that have contact once per week or more (b = -1.32, p = .040) tend to be less watchful towards agencies. This is an interesting finding, as we did not see such results in the separate analyses presented above. We do not find any correlations between other variables and watchfulness towards agencies. We should again mention that these results can be skewed due to the limited sample size in the analyses ( $R^2 = .37$ , F(19, 124) = 3.76, p < .001).



**Takeaway**: Including all variables in the various models, we find mixed results. For example, we find that generally, including all actors in the models, the correlations between contacts and watchfulness, and between information sharing and watchfulness vanish. The correlations of having mostly similar and mostly different views remain in force, however. When specifically focusing on public and private actors, we find more mixed results, Yet, the correlations between having mostly similar or mostly different views and watchfulness remains rather strong in these models. Interestingly, we also find that the watchfulness towards agencies tends to be lower when actors have frequent contacts. We did not find similar results in the separate analyses.

# 2.4 Conclusions: To what extent do interactions between actors in regulatory regimes relate to trust and watchfulness between actors?

The main conclusions are as follows:

- Both in the separate model as well as the combined model, we find that contacts between actors indeed correlate with higher levels of trust between those actors. In particular, we find that high frequency contacts (more than once per month) repeatedly correlates with high trust between actors. We find these results across all actor groups, both public and private.
- We also find that sending information also relates with higher levels of trust among actors in the regime. Especially when actors are obliged to send information, they also tend to trust other actors in the regime more. Yet, when including the other effects in the models, this positive relation disappears. This highlight that the other variables, in particular high frequency contacts and views, are more prominent covariates of trust between actors.
- In terms of views, we find that actors with converging views tend to trust one another more. At the same time, however, we also found that actors that have mostly different views with one another also tend to trust one another more. This might point towards the idea that the closer actors are with one another, the better they know one another and thus the higher the trust between these actors. We also find that this relation is robust when including the other variables in the analyses.
- Looking at the relations between interactions and watchfulness, we find that high frequency contacts also positively relate to watchfulness. Yet, the relations disappear when including all variables in the analysis.
- Across the various models distinguishing specific actor groups, we find that public actors are especially more watchful towards actors to whom they send information. For private actors, we only see these relations when they are obliged to send information. Such effects are not robust, as our models show.
- We find similar results for actors receiving information from other actors. In this regard, public and private actors' watchfulness increases if they receive information from actors. Yet, also this relation disappears in the model including all interactions.
- Lastly, we find some evidence that actors' watchfulness is related to the convergence or divergence of views. These relations are not uniform across all actors in the network. We specifically find that private actors tend to be more watchful towards actors that have mostly similar or mostly different views. Whereas the effects of contacts and information sharing disappear in the combined model, we find that the correlations between views and watchfulness remain intact. This thus indicates that watchfulness indeed relates to the convergence or divergence of views between actors in regulatory regimes.


# **3.** How do interactions and trust/watchfulness relations influence perceptions of regime confidence, compliance and consent among the stakeholders of regulatory regimes? (RQ2)

In this section we discuss the findings regarding the second research question, being:

*RQ2:* How do interactions and trust/watchfulness relations influence perceptions of regime confidence, regulatory compliance and consent among the stakeholders of regulatory regimes?

This research question is dealt with through several sub questions:

*RQ2.1:* To what extent does trust in regulatory agency influences regime performance (regime confidence and compliance)?

RQ2.2: To what extent do high levels of trust among and towards regime actors influences the performance (regime confidence, compliance) and the legitimacy (regulatory consent) of the regulatory regime?

RQ2.3: To what extent do interactions and trust/watchfulness relations affect regime effects (regime confidence, regulatory compliance and consent)?

The rest of this section is structured along these sub research questions, and for each of the sub research questions first the methodology is briefly recapitulated (with reference to other deliverables in which data collection is fully detailed) and then the main findings are discussed.

### **3.1** To what extent does trust in the regulatory agency influence the performance of the regulatory regime (regime confidence and compliance)?<sup>18</sup>

In this section we pose the question: to what extent does the trust in regulatory agency influence the performance of the regulatory regime? Regardless of their specific goals (be they related to economic, social, or risk regulation), well-performing regimes are those where there is a generalized perception that regulatees comply with the rules, and, respectively, that the regulatory framework and regulatory interventions protect rule beneficiaries from potential harm deriving from the opportunistic behavior of those being regulated and from other risks and externalities. The performance of regulatory regimes is hence conceptualized both in terms of making regulatees comply (as intermediate goal), and in terms of keeping citizens as beneficiaries safe from opportunistic behavior from regulatees (as ultimate goal) (Coglianese 2012). Hence, more precisely, we analyze whether the extent to which the stakeholders perceive the regulatory agency to be trustworthy matters for the extent to which they perceived the broader regulatory regime to protect citizens from harm (i.e. regime confidence) and to make regulatees comply (i.e. compliance) with the regulations? What is the effect of an agency which is perceived as competent, integer and benevolent on the perceived regime performance?

This question is both scientifically and societally relevant for two reasons. First, the perception of regime performance by rule makers (including legislative politicians, ministries, or regulatory agencies), regulatees and their interest groups, as well as the representatives of rule beneficiaries matters. These public and private stakeholders have first-hand information on regime performance, as they operate within that regime. Hence, their perception on regime performance in terms of regulatory compliance and protecting citizens from harm - at least to some extent - reflects the functioning of the regulatory regime. More importantly, irrespective of whether their perceptions mirror the actual functioning of the regulatory regime, stakeholders' perception of regime performance are tightly related to their support for the regime. Hence, when regime actors perceive the regulatory regime to perform well, this perception is valuable in itself, as

<sup>&</sup>lt;sup>18</sup> This section is based on the TiGRE paper: Verhoest Koen, Six Frédérique, Latusek-Jurczak Dominika, Wynen Jan, Grimmelikhuijsen Stephan, Kappler Moritz, Levi-Faur David, Maggetti Martino, Salomonsen Heidi H., Triviño Juan Carlos, Trondal Jarle (2022). To what extent does a trustworthy regulatory agency matter for a well-performing regulatory regime? Conference paper presented at the EGPA conference in Lisbon.



such regime actors will be inclined to support the functioning of the regulatory regime by cooperating with other regime actors and to pose behavior which further fosters regime performance.

Second, answering this research question will give a better view on to what extent regulatory agencies are seen as important in securing the performance of the regulatory regime in which they are active. Regulatory agencies are generally considered by both regulatory governance scholars, but also governments and international organizations, like the OECD, to be a core actor in a regulatory regime. As such, agencies are thought to influence the performance of the regulatory regime to a very large extent, as they take regulatory decisions and actions, stimulate regulatees to comply and protect citizens from harm. However, one can put this logic into question.

First, the actual influence of regulatory agencies on the functioning of regulatory regimes is merely indirect, as well as hard to assess in an objective way. The actual influence of agencies' actions is dependent upon the cooperation of regulatees. Moreover, the effects of the agencies' actions on regime functioning only manifest themselves in the longer run and not immediately after the specifically involved actions of the regulatory agency, making it hard to attribute certain regime evolutions to the regulatory agencies' actions.

Second, regulatory regimes are very complex in their set-up nowadays. In most sectors, several other public authorities and private regulatory intermediaries on different governance levels (EU, national, and in some sectors also subnational) are involved with rule making or rule-enforcing roles. In turn, the exact actual influence of the regulatory agency on the performance of the regulatory regime is diluted by the actions of other authorities, which can be either weakening or reinforcing the effect of the regulatory agencies' actions.

If the analyses show that the perceived trustworthiness matters to a large extent for the regime functioning and that this is even more so under specific contextual conditions, then relevant recommendations can be made for policy and practice. Hence, studying to what extent the trustworthiness of the regulatory agencies matters for the perceived performance of regulatory regimes and which sector-level and actor-level factors strengthen or weaken the effect of the agencies' trustworthiness on perceived regime performance, is relevant.

#### 3.1.1 Data and methodology

The data used comes from the WP2 survey. For more information about this survey, respondents and data collection, please see (Bach et al. 2022). Table 6 provides information about the operationalization and the way the variables that are used in the analyses are constructed. For the dependent variable a PCA showed both dimension load on one factor, and in the analyses the factor scores are used. Similarly for the independent variable 'trustworthiness of the NRA' a PCA shows all three dimensions loading strongly on one factor, and the factor scores are used in the analyses.

Name of variable	Elements/Survey Question(s)	Scale/values	Way of computing the variable for the analysis
Dependent Variable: Regime Performance (as factor of two dimensions)	<ul> <li>(1) Citizens being protected from harm: Think about how [the protection of personal data is/financial services are/food is] regulated in [insert country name]. How confident can citizens be that [their personal data is handled safely/their financial assets are handled safely/the food they eat is safe]?</li> <li>(2) Regulatees' compliance: Overall, to what extent do you think that [specific kind of company/organization] comply with [data protection regulations/financial regulations/food safety regulations] in [country]?</li> </ul>	<ul> <li>(1) 7-point Scale: 1-7 from 'Completely unconfident' to 'Completely confident'.</li> <li>(2) 11-point scale: 0='do not comply at all'/ 10='fully comply'. – for each sector respondents are asked about two kinds of regulated organizations each linked to a subsector</li> </ul>	Factor dependent variable based on PCA weighting both dimensions (see annex)

Table 6: Variables included in regression models



Independent variable: trustworthiness of the national regulatory agency (as factor of three ABI variables)	<ul> <li>The [name of core actor] is an important supervisory institution for [sector]. A main task of the [name of core actor] is therefore to assess compliance with existing rules for [sector].</li> <li>On a scale from 0 never to 10 always, to what degree do you think [name of core actor] will</li> <li> follow sound principles when interacting with others (integrity)</li> <li> take the interests of organizations like mine into account (benevolence)</li> <li> performs its tasks in a very competent way (competence)</li> </ul>	11-point scale from 0 'never' to 10 'always'	Factor based variable based on PCA weighting the three dimensions	
Moderating variable 1: Distribution of regulatory tasks	By mapping the regulatory task per sector in each country, we distinguish between sectors in which there is only one regulatory body, being the national regulatory agency versus sectors in which there are multiple regulatory bodies at national level (or on regional level in case of federal states)	Binary variable: 0: concentration of regulatory task in one single national regulatory agency; 1: distribution of regulatory tasks across multiple bodies	Coded based on secondary sources	
Moderating variable 2: Trustor's interests	Based on the actor type in the mapping, distinguishing: - public and consumer interests (reference category): respondent belonging to public and regulatory actors (legislative politicians, executive bodies, regulatory intermediaries, and non-judicial appeal bodies) + consumer associations - regulatee interests: respondents belonging to regulatees (actor type 6) + business interest groups (actor type 7.1)	Binary variable: 0: public and consumer interests (reference category); 1: regulatee interests	Coded into a binary variable based on actor type to which the survey respondent belongs	
Moderating variable 3: Trustor's direct experience with regulatory agency	Do you know this institution [the specific national regulatory agency in the involved sector and country]? + frequency of interaction (respondents who have not heard of these institutions are excluded from the data set)	1=1 have heard of thisinstitution but have neverinteracted with them.2=1interact/haveinteractedwiththisinstitution less than once amonth.3=1interact/haveinteractedwiththisinstitution more than oncea month.	Coded into a binary variable based on survey question, with value 0 for no or little interaction, and 1 for a high level of interaction	
Country controls:	Categorical variable with nine countries	categorical	Belgium as reference category	
Attitudinal control 1: general propensity to trust	In general, how much do you trust most people? (ESS)	11-point scale: 0-10, 'Do not trust at all' – 'Trust completely'.		
Attitudinal control 2: attitude towards strict government regulation	Think about the economy in general. How strictly should government regulate business to protect the people? Please bear in mind that strict regulation may affect businesses' competitiveness.	11-point scale: 0- 10, 'Not strictly at all' – 'Very strictly'		
Socio-demographic controls: age, gender, education, length of tenure, being in management position				

We performed regression analyses on different models for trustworthiness of the national agency as independent variable. The basic model includes all the variables except the independent variable



'trustworthiness of the national regulatory agency'. A subsequent model adds the independent variable (trustworthiness of the national regulatory agency) and enables us to learn about the effect of trustworthiness of the NRA on the perceived regime performance. In the subsequent six models we run separate analyses for each value of the three moderators (i.e. the number of regulatory agencies in the regime, the interests of the trustor and the interaction with the regulatory agency), allowing us to compare the effect of trustworthiness of the NRA on regime performance under different conditions at sectoral and individual level.

### 3.1.2 Findings

What do we learn from these analyses, in which we control for country differences, sector differences, as well as socio demographical and attitudinal features of respondents? First, we see that respondents that report higher levels of trustworthiness of the national regulatory agency also perceived the regulatory regime to perform better in terms of compliance by regulatees and in terms of keeping citizens safe from harm. The effect size is big with a beta of 0.169; and adding the trustworthiness of the national regulatory agency to the basic model increases the explanatory power of the model by 3% (R<sup>2</sup> increases from 0.205 to 0.232). The SLR test shows that adding trustworthiness provides a significantly stronger explanation compared to the basic model ( $\chi^2(1)=30.54^{***}$ ).

This research shows that stakeholders, assessing the trustworthiness of the national regulatory agency to be high, are clearly more likely to perceive the whole regulatory regime as performing well. This implies that the stakeholders' assessment of the trustworthiness of the regulatory agency is important for the support of regime actors towards the regulatory regime. It is also important for actors' actual cooperation with other stakeholders and with the national regulatory agency itself. However, we should not overestimate the extent to which the trustworthiness of the regulatory agency matters for perceived regime performance, as trustworthiness only explains an additional 3% of the variance in regime performance. Hence, while the regulatory agencies' trustworthiness is important to make a regime well-functioning, it appears to be less important and central that is generally assumed.

To know under which conditions the national regulatory agencies' trustworthiness matters more or matters less, we performed additional analyses with three moderating factors. First, we find that when the national regulatory agency shares supervisory tasks with other regulatory agencies, perceived trustworthiness of the regulatory agency has a stronger positive effect on regime performance, compared to sectors in which all supervisory tasks are taken up one agency. The negative effect of a lack of trustworthiness in the national regulatory agency on regime performance is actually strengthened in sectors which have multiple regulatory bodies. In this case there is not only the capacity of each agency that matters, but also the degree of coordination and collaboration among these agencies. A lack of trustworthiness of the national regulatory agency also implies a lack of trust in the agency's capacities and abilities to coordinate and collaborate with the other regulatory actors. On the contrary, when the trustworthiness of the national regulatory agency is high, the positive effect on regime performance is strengthened. This suggests that national regulatory agencies with high perceived trustworthiness are considered to be capable to coordinate and collaborate with the other regulatory actors in such a way that having multiple regulatory actors becomes a comparative advantage in terms of achieving a higher regime outcome. When trust is high and actors cooperate, the number of regulatory agencies matters less, whereas when trust is low, cooperation is less straightforward and the number of regulatory agencies in the regime matters more. Please note that this effect of having multiple or a single regulatory agency is independent from other features of the studied sectors or countries, as we control for sector and country in the analyses.

We also checked whether the influence of the perceived trustworthiness of the national regulatory agency on regime performance differs when stakeholders have *regulatee-related interests* compared to when stakeholders have *public and consumers' interests*. It was found that stakeholders with public and consumers' interests find the agencies' trustworthiness more relevant when rating the regime's performance, while this is less the case for stakeholders with regulatee-related interests.



Two elements seem to be at play here. First, regulatees and interest groups regard their own contribution to a well-performing regulatory regime as rather large and substantial. Hence, they perceive the achievement of a well-performing regime as a shared accomplishment between regulatory agencies and themselves, while public actors and consumer associations look more to the regulatory agency as a main safeguard of a wellfunctioning regulatory regime, rather than to the regulatees. Second, the difference between public actors and consumer associations as trustors versus regulatees and interest groups as trustors mainly manifest itself in case of national regulatory agencies with low perceived trustworthiness. When perceived trustworthiness of a national regulatory agency is high, then trustors with public and consumer interests see the influence of the regulatory agencies' trustworthiness on regime performance as equal. Regulatory agencies must balance conflicting interests. They must balance the often-economic interests of regulatees with a focus on profit and a vibrant economy, and the public and citizen interests of being safeguarded from harm in terms of e.g., health, environment and financial harm. When stakeholders see the regulatory agency as highly trustworthy, they perceive the agency to be sufficiently competent, benevolent and integer to balance those conflicting interests. Consequently, stakeholders are more likely to perceive the whole regime to perform well. In turn, it does not matter whether the trustor is representing regulatee or public interests. When, on the other hand, trustworthiness of the regulatory agency is perceived to be low, it does matter. Trustors likely wonder whether the agency is balanced and fair in dealing with conflicting interests, or whether it is competent and acts with integrity. Consequently, especially trustors representing public and citizen interests, who are more vulnerable, will in this case see regime performance as particularly low.

We also studied whether the influence of the trustworthiness of the national regulatory agency on regime performance as perceived by stakeholders differs when the stakeholders have *no or little interactions with the national regulatory agency versus when stakeholders have intensive interactions with the national regulatory agency*. The underlying logic is that stakeholders which have many interactions with the national regulatory agency, have more direct-hand experiences and thus more knowledge about the agencies' way of working, its actions and the effects for the regime thereof. Strikingly, we found that stakeholders, either public or private stakeholders, which never or seldomly interact with the national regulatory agency perceive the influence of the latter's trustworthiness on the performance of the regulatory agency. This implies that actors with much direct experience and interaction with the agency are more understanding towards the modest impact of a (un)trustworthy regulatory agency on the perceived regime performance.

In earlier analyses, we also checked for the impact of maturity of the regulatory regime, and we found that sectors with a regulatory regime which is younger, less stable and more in flux (like in the data protection sector, compared to the finance and food safety sectors), the influence of the trustworthiness of an agency on the perceived regime performance is lower. That runs against the expectation that in young and unstable regimes the safeguarding role of regulatory agencies tends to be relatively higher. Stakeholders in mature sectors know better what to expect from each other and see the role of the national regulatory agency as more valuable. We see similar patterns emerging in the other sectors, where less institutionalized subsectors (like the newer fintech subsector within the sector of financial regulation). Another explanation might also be that in data protection, the ultimate outcome, being safe data and unthreatened privacy, is of a more intangible nature, compared to safe food or financial assets, and hence assessing the actual contribution of a trustworthy regime is harder to assess for stakeholders.

### 3.1.3 Conclusions: To what extent does trust in the regulatory agency influences regime performance?

The main conclusions can be summarized as follows:

• A trustworthy national regulatory agency matters for the performance of a regulatory regime, as it facilitates, according to the stakeholders, regulatee compliance and keeps citizens safe from harm<sup>19</sup>.

<sup>&</sup>lt;sup>19</sup> Yet, as we will note in the next section, the actors should, at the same time, not blindly trust the regulatory agency. Instead, regulatory regimes perform better when actors are also (somewhat) watchful toward agencies.



- However, the role of a trustworthy national regulatory agency for a well-functioning regulatory regime should be considered with modesty. For stakeholders, a well-functioning regime depends on many other factors, besides a competent, ethical and benevolent national regulatory agency. We will return to that point in the next sections, where we focus on the way the different stakeholders and actors (legislators, administrations, regulatory agencies, regulatory intermediaries, interest groups and consumer organizations) interact and how they trust each other, and how this in turn affect the functioning of the whole regulatory regime.
- There are some conditions, which impact upon the extent that stakeholders' perceptions of the trustworthy of the national regulatory agency influence their perception of the regime functioning well: the extent to which supervisory tasks are centralized in this national regulatory agency, or distributed among multiple (national or regional) bodies (strengthening effect), the extent in which the involved stakeholder represents regulatee-related interests (weakening effect), and the direct experience and interaction of the stakeholder with the national regulatory agency (weakening effect).
- However, we find that this context especially matters in situations where stakeholders perceive the national regulatory agency as untrustworthy. An untrustworthy national regulatory agency leads more directly to stakeholders perceiving the regime performing badly, perceiving low compliance by regulatees and being unconfident that the regime will protect citizens from harm. This is particularly the case in the following circumstances: when supervisory tasks are distributed among multiple regulatory agencies, when the stakeholders defend public and consumer interests, and when the stakeholders have little interaction with the national regulatory agency. These contextual factors matter much less when the national regulatory agency is perceived to be highly trustworthy.

This section discussed the importance of a trustworthy national regulatory agency for the proper functioning of a regulatory regime. While a competent, ethical, and benevolent regulatory agency can help regulatees to comply, and ensure the safety of citizens, it is just one of many factors that contribute to a well-functioning regime. Other stakeholders and actors, such as legislators, administrations, and interest groups, also play a crucial role in the functioning of the regulatory regime. The section explores the contextual factors that impact stakeholders' perceptions of the trustworthiness of the national regulatory agency and how it affects their perception of the regime's performance. It highlights that a lack of trust in the regulatory agency can lead to a negative perception of the regime's performance, and even more so in situations where supervisory tasks are distributed among multiple regulatory agencies, stakeholders defend public and consumer interests, and when stakeholders have little interaction with the regulatory agency.

# **3.2** To what extent do high levels of trust among and towards regime actors influences the performance and the legitimacy of the regulatory regime?<sup>20</sup>

In the previous section we focused on the trust in the national regulatory agency as driver for regime performance, meaning that regulatees comply well (i.e. regulatory compliance) and that citizens are safe from harm (i.e. regime confidence). In this section we expand our analyses in three ways:

1. We focus on the extent to which different stakeholders (legislators, administrations, regulatory agencies, regulatory intermediaries, regulatees, interest groups and consumer organizations) trust each other and how this relates to the functioning of the regulatory regime. So, we pay attention to the extent to which *relations of high trust exists among the stakeholders* in the regulatory regime, as we expect this to positively affect the functioning of the regime (also see Figure 6 which depicts trust relations within regulatory regimes).

<sup>&</sup>lt;sup>20</sup> This section is based upon the TiGRE paper (under development): Verhoest Koen, Wynen Jan, Guaschino Edoardo, Maggetti Martino (2022). Not whether but how: The impact of (dis)trust on performance and legitimacy in regulatory regimes. Paper presented at EGPA, September 2022 in Lisbon.





Figure 6: The regulatory regime with core actors and peripherical actors

- 2. While in the previous section we did not consider watchfulness between actors (as a behavioral expression of distrust), in this section we will elaborate on the interplay between trust and watchfulness, by distinguishing between 'good faith trust' (high trust and low watchfulness) and 'watchful trust' (high trust combined with high watchfulness) (see also section 2.1 for these concepts and their prevalence in the studied sectors).
- 3. In this section we do not only consider regime performance (regime confidence and compliance) as an outcome, but also regime legitimacy, being the extent stakeholders accept decisions made by the regulatory regime. Acceptance here refers to whether decisions were taken in a procedurally fair way (even if that decision runs against one's own opinion or interest). A procedurally legitimate regulatory regime is thus one where stakeholders find the procedures of the regime and the way regulatory decisions are made acceptable, manifesting itself in decisions on substantive rules are considered as appropriate ("fine as it is"), and deploys adequate enforcement procedures ("as they should") that are also handled appropriately ("neither too strict nor too loose"), irrespective of case-by-case decisions.

Accordingly, our research questions for this section are as follows:

- 1. How does the presence of high trust relations among and towards regime actors affect (perceptions of) regime performance and regime legitimacy? More precisely, does the extent to which regime actors are highly trusting towards each other and by the regulatees, interest groups and consumer actors positively affect the extent to which the regulatory regime is perceived as being well-performing and legitimate?
- 2. Is the effect of high trust among regime actors conditional upon watchfulness? In other words: Does high trust among and towards regime actors have a stronger impact on regime performance and on regime legitimacy when it is combined with high watchfulness ("watchful trust" relations) rather than when it occurs without high watchfulness ("good faith trust" relations)?



#### 3.2.1 Data and methodology

For this section, again the data from the WP2 survey is used. 1087 observations have full data for the variable we use in this analysis and have been included in the analyses.

We use the following independent variables:

Relations of 'high trust' are considered those corresponding to trust assessments equal or above a value of 7 on the 0 to 10 scale, where 6 corresponds to "rather high" trust, and afterwards trust is perceived as "high" (to "full") from the value 7 onwards.

Relations of 'high watchful trust' relations are considered those corresponding to those relations with high trust/high watchfulness, that is, trust assessments equal or above a value of 7 on the 0 to 10 scale, combined with watchfulness assessments equal or above a value of 7 on the 0 to 10 scale. Similar to the above, 6 corresponds to "rather high" watchfulness, and afterwards watchfulness is perceived as "high" (to "full") from the value 7 onwards.

Relations of 'high good faith trust' relations are considered those corresponding to high trust combined with low watchfulness relations, that is, trust assessments equal or above a value of 7 on the 0 to 10 scale, combined with watchfulness assessments equal or below a value of 3 on the 0 to 10 scale. The value 3 corresponds indeed to "low" trust, in between 2 ("very low") and 4 ("rather low").

Such relationships are counted towards six regime actors, so that independent variables can take values from 0 to 6 for each specific actor: regulatory agencies, ministries, legislative politicians, EU bodies, regulatory intermediaries, and courts. It is important to remark that they are measured for the above-mentioned regime insiders towards each other, and, respectively for stakeholders (regulatees, interest groups, consumer associations) towards these regime insiders. Conceptually, these relationships relate to the density of a network, whereby density depends on the number of outgoing trust relationships counted towards other actors.

In sum, the independent variables we use in the analyses are:

- 1. Number of high trust relations towards the regime actors (0-6)
- 2. Number of relations of high watchful trust towards the regime actors (0-6)
- 3. Number of relations of high good faith trust towards the regime actors (0-6).

We use in the analyses two dependent variables:

*Perceived regime performance* is the first dependent variable of our study. It has been constructed as a factor loading-based score composed of two elements: (1) respondents' perceptions of the extent of compliance to regulation by two types of regulatees in the investigated sector (0-10 scale, two items); and (2) respondents' perceptions that citizens are protected from harm, more specifically, perceptions that citizens' transactions in that sector can be considered to be safe (7-point scale, one item) (see section 2.2).

*Regime legitimacy* is the second dependent variable. It has been constructed as a factor loading-based score composed of three elements: (1) respondents' perceptions that sector-specific rules in terms of content are "fine as they are", versus being "too loose" or "too strict" (7-point scale, recoded on three-point scale measuring consent); (2) respondents' perceptions that sector-specific rules in terms of enforcement are "fine as they are" versus being "too loose" or "too strict" (7-point scale, recoded to three-point scale measuring consent); and (3) respondents' agreement with the statement "The processes through which regulation is enforced are as they should be". As such, it operationalizes the acceptance of the procedures and of the ways decisions are made.

We included control variables, including the respondents' socio-demographic features, general propensity to trust, the respondents' attitude towards government regulation, country, sector, regime actor respondent versus non regime actor respondent.

The statistical analysis estimates linear multi-variate regressions models.



### 3.2.2 Findings

The regression analyses showed the following findings:

- 1. Regarding **regime performance**: The number of high trust relations towards regime actors has a positive statistical effect upon perceived regime performance (beta is 0.231 \*\*\*; R<sup>2</sup> increases from 0.143 to 0.291 when adding this variable to the model with only the controls ; the LR test indicating statistical difference from the control model is significant:  $\chi^2(1)=202.29^{***}$ ).
- 2. The positive effect of high trust relations on perceived regime performance is stronger when high trust is combined with high watchfulness ("watchful trust"), compared to relations in which high trust is combined with low watchfulness ("good faith trust"). When we turn the impact of high watchful trust relations towards regime actors upon perceived regime performance, we also observe a positive statistical effect (beta: 0.134 \*\*\*; R<sup>2</sup> increases from 0.143 to 0.187 when adding this variable to the model with only the controls; the LR test indicating statistical difference from the control model is significant:  $\chi^2(1)=53.38^{***}$ ). The number of high good faith trust relations towards regime actors has a positive, but smaller statistical effect upon perceived regime performance when compared to the effect of high watchful trust relations (beta:  $0.065^{***}$ ; R<sup>2</sup> increases only slightly from 0.143 to 0.158 when adding this variable to the model is significant:  $\chi^2(1)=15.20^{***}$ ).

Hence, having high trust between and towards regime actors (regulatory agencies, legislative politicians, administrations and regulatory intermediaries, courts as well as EU-level bodies) results in regulatory regimes which are perceived to function better, both in terms of inducing regulatees to comply well and in terms of safeguarding citizens from harm. This shows the relevance of fostering high trust relations among the actors in the regulatory regime, as they foster cooperation among actors.

However, the number of high watchful trust relations towards regime actors has a stronger effect upon perceived regime performance, compared to the number of good faith trust relations. So, watchful trust – wherein trust coexist with watchfulness as manifestation of distrust – is more impactful than good faith trust -on perceived regime performance. Actors who combine high trust with high watchfulness towards other regime actors have more positive perceptions of regime performance, compared to actors who combine high trust with low watchfulness. It appears thus that a *'trust but verify'* attitude is superior in comparison with blind trust in terms of fostering regime performance, with regulatees complying well and citizens being safeguarded from harm. Trust should not be unbound and, respectively, a certain amount of watchfulness (as a behavioral expression of distrust) can be functional to make the regulatory regime perform well and to sustain this high performance.

- 3. Turning to the analyses regarding **regime legitimacy**, the statistical analysis indicates that the number of high trust relations towards regime actors has a positive statistical effect upon perceived regime legitimacy (beta: 0.155 \*\*\*; R<sup>2</sup> increases from 0.088 to 0.189 when adding this variable to the model with only the controls; the LR test indicating statistical difference from the control model is significant:  $\chi^2(1)=117.57^{***}$ ).
- 4. The positive effect of high trust relations on perceived regime legitimacy is a bit stronger when high trust is combined with low watchfulness ("good faith trust"), compared to relations in which high trust is combined with high watchfulness ("watchful trust"). The number of high watchful trust relations towards regime actors has a very small positive statistical and weak effect upon perceived regime legitimacy (beta:  $0.045^*$ ; R<sup>2</sup> increases a bit from 0.088 to 0.103 when adding this variable to the model with only the controls; the LR test indicating a very small but significant statistical difference from the control model is significant:  $\chi^2(1)= 8.17^*$ ). The number of high good faith trust relations towards regime actors has also a quite small positive effect upon perceived regime legitimacy, with the effect being a bit stronger in comparison with high watchful trust relations (beta:  $0.061^{***}$ ; R<sup>2</sup> increases from 0.088 to 0.111 when adding this variable to the model with only the controls; the LR test indicating statistical difference from the control model is significant trust relations (beta:  $0.061^{***}$ ; R<sup>2</sup> increases from 0.088 to 0.111 when adding this variable to the model with only the controls; the LR test indicating statistical difference from the control model is significant and higher than for the previous model with watchful trust:  $\chi^2(1)= 18.22^{***}$ ).



Perceptions of regime legitimacy are somewhat higher for regime actors who combine high trust with low watchfulness towards other regime actors – *good faith trust* –when compared to actors who combine high trust with high watchfulness towards other regime actors – indicating *watchful trust* (although coefficients are relatively small). In other words, when actors have high trust, their perceptions of regime legitimacy are somewhat enhanced when such trust is combined with low levels of watchfulness, compared to when high trust is combined with high watchfulness. Extra analyses provide extra support for this interpretation, as they indicate that high watchfulness per se (corresponding to respondents having more high distrust relations with other actors) - that is without considering high trust relations - has a (albeit small) negative statistical effect on the perceived legitimacy of the system.

High trust among regime actors, especially when this is without reservations and not combined with the need to be watchful, produces a somewhat higher level of acceptance and support towards the system (the regulatory regime) and leads to consider procedures and the way decisions are made to be more appropriate and legitimate. But what mainly matters is that high watchfulness relations have a negative impact on regime legitimacy and hence should be avoided.

### **3.2.3** Conclusions: To what extent do high levels of trust among and towards regime actors influences the performance and the legitimacy of the regulatory regime?

The main conclusions can be summarized as follows:

- Fostering high trust relations among political, administrative, regulatory agencies, regulatory intermediaries, courts and EU-level bodies, and encouraging high trust from regulatees, interest groups and consumer associations towards these actors is clearly important. Actors who have high trust in many of the other actors in the regulatory regime will consider the regulatory regime to be more performant in terms of achieving a better compliance and safeguarding citizens from harm. At the same time, these actors will also consider the regulatory regime to be more legitimate, in the sense that they accept the procedures, and the way regulatory decisions are made, even if these decisions go against their own opinion and interests.
- However, when one wants the regulatory regime to perform well (in terms of compliance and regime confidence), then 'good faith trust' among regime actors is less recommendable, compared to having 'watchful trust' among and towards regime actors. Regime performance in terms of sufficient compliance by regulatees and safeguarding citizens from harm is better served by having a 'trust but verify' attitude among and towards regime actors. We especially see this in less mature (sub)sectors (such as data protection and FinTech). In these sectors, rapid technological developments make that actors (e.g. agencies, ministries and executive bodies) have limited expertise or knowledge on how to respond to these developments.
- But when it comes to stimulating the extent to which regime actors consider the procedures and way decisions are made as acceptable in the regulatory regime (regime legitimacy), then high levels of watchfulness between and towards regime actors seems to be less functional. When there is too much watchfulness as an expression of distrust between and towards regime actors, the legitimacy of the regulatory regime might suffer. Hence, when the main concern is to stimulate the consent of regime actors and other stakeholders with the way the regulatory regime works procedurally, then one should try to avoid the emergence of high watchfulness relations among actors. This issue of insufficient legitimacy linked to too low levels of trust and too high levels of watchfulness was noticeable in the subsector of fintech where several private sector actors active in fintech in particular did often not agree on how decisions were made as they as new actors felt insufficiently included into established decision processes.
- This also points to potential trade-offs in terms of stimulating a regulatory regime that is considered to be both well-performing and legitimate at the same time, when it comes to watchfulness relations between partners.



To conclude: Fostering high trust relations among actors within the regulatory regime is important for achieving better compliance and safeguarding citizens from harm. However, good faith trust is less recommendable compared to having watchful trust among and towards regime actors. It is better to have a 'trust but verify' attitude for stimulating regime performance. High watchfulness between and towards regime actors may lead to a lack of legitimacy of the regulatory regime. Hence, to stimulate the legitimacy of regime actors and other stakeholders with the way the regulatory regime works procedurally, one should try to avoid the emergence of high watchfulness relations among actors. There are thus potential trade-offs when it comes to stimulating a regulatory regime that is considered well-performing and legitimate at the same time.

## 3.3 To what extent do interactions and trust/watchfulness relations affect regime effects (regime confidence, regulatory compliance and consent)?

#### 3.3.1 Data and methodology

In the following paragraphs, we will analyze the 18 sector-country networks (see D3.1) and how the actors in these networks assess the regulatory regime itself in terms of regime effects. The data on regime effects are based on the WP2 survey in which various actors were asked about how they assess the regime in terms of regime confidence, compliance by regulatees and consent with rules and enforcement (see below for the used measures). Additionally, the analyses use the WP3 questionnaire data, collected in T3.2 and T3.3 on actor groups' interactions with other actor groups in their specific regime. In a first step, the WP2 survey data have been aggregated by taking the means of the responses of the actors within a specific sector and country. We did this for the surveys' responses on regime confidence, compliance and consent. These three regime effects correlate to some extent (also see Annex B). In a second step, we constructed various networks based on the dyadic, relational data from WP3. Key within social network analysis is that data is structured in terms of 'sending' and 'receiving' actors. Hence, the survey data (asking respondents questions about their interactions with other actor groups) has been restructured as to fit this format. This resulted in a dataset listing 9744 unique relations between actor groups. The following actor groups have been included in the dataset:

- 1: Legislative politicians
- 3: Agency
- 4: Regulatory Intermediary
- 5: Ministry / executive bodies
- 61: Regulatee 1
- 62: Regulatee 2
- 71: Interest Group 1
- 72: Interest Group 2
- 73: Consumers / ombudsman

The relations between these actor groups are then transformed into networks. These networks are split between countries, sectors *and variables*. The latter is important as each of the interactions as measures in the survey are different types of interaction. For example, having contact with an actor is not the same as trusting that actor. We thus have, per country and per sector, a total of **8 networks** (e.g. a Contact-network for Belgian data protection, or a Trust-network for Norwegian food safety). Below you can see the overview of the networks, as well as how the values have been recoded as to simplify the networks.



Variable name	Recode of values	Explanation	
Contact	<ul> <li>High intensity (2): values 3 &amp; 4</li> <li>Low intensity (1): values 1 &amp; 2</li> <li>No contact: values 0</li> </ul>		
InfoSend	Dichotomous (1: yes, 2: no)		
InfoReceived	Dichotomous (1: yes, 2: no)		
Views_pos	Positive views: value 2 & 3	Networks cannot be made with negative values, but by splitting the variable into a positive and	
Views_neg	<ul> <li>Negative views: value -2 &amp; -3</li> </ul>		
Views_neut	<ul> <li>Neutral views: value 1 &amp; 0</li> </ul>	negative network we estimate these interactions better.	
		Note: Views is a difficult variable for SNA, as having the same views does not really constitute as a (social) interaction.	
Trust	<ul> <li>High trust: values ≥ 7</li> <li>Low trust: values &lt; 7</li> </ul>		
Watchfulness	<ul> <li>High watchfulness: values &gt; 7</li> <li>Low watchfulness: values &lt; 7</li> </ul>		

#### Table 7: Variables and recoding for network analysis

These 8 networks are, of course, multiplied by the number of countries and the number of sectors, resulting in a total number of networks of 142 (2 networks have not been included in the analysis due to lack of data). Using social network analysis on these networks, we can compute several indices that tell us more about the structure of the networks. To measure the structure of the networks, we focus on a main metric: density (for all interactions). Density is a measure of how many ties between actors exist compared to how many ties between actors are possible. It thus tells us something about the interconnectedness of actors in a specific network. Density is calculated by dividing the number of existing connections between actors by the highest number of theoretically potential connections.

In the following paragraphs we will combine the information on the regime effects and the network metrices to get insights in how interactions between actors relate to how the actors assess the outcomes of the regime itself. We will present through two-axis graphical plots how the variables correlate with one another. The graphical plots follow a similar format: the X-axis (horizontal) refers to the regime outcome, being:

- regime confidence (average across all actor groups on the WP2 survey response regarding to what extent citizens can be confident that their data/food/financial assets are safe – 1-7 scale from completely unconfident to completely confident with 4 as neutral point),
- regulatory consent: refers to the response regarding to what extent do respondents regard the rules and the way the enforcement is done is just fine as it is versus too strict or too loose (average for both items) The original 1-7 scale from way too strict to way too loose with 4 as a neutral point has been transformed in such a way that negative values shows extent to which actors perceive rules in terms of content and enforcement as being too strict or too loose, and a value (close to) zero means that actors perceive rules in terms of content and enforcement being just fine as they are).
- compliance by regulatees (average across all actor groups on the WP2 survey response regarding to what extent respondents perceived the two groups of regulatees are complying with the regulations – average for both items – 0-10 scale where 0 is do not comply at all and 10 is fully comply) and

As already indicated earlier in this report, both regime confidence and compliance are indicators of *the performance of the regulatory regime*, i.e. how well the regulatory regime in that sector functions according to the different stakeholders both in terms of securing compliance by *the regulatees and in terms of safeguarding citizens from harm. Regulatory consent refers to the legitimacy of the regulatory regime* in the



eyes of the stakeholders and indicates to what extent they find the procedures and the way decisions are taken appropriate and legitimate, even in case they do not agree with the content of decisions taken.

#### Important note for the reader:

As the number of sectors is limited (n = 18) and has some outliers it is impossible to statistically determine significance of any of the relations we observe. Hence, we use the following decision rule which is to some extent arbitrary: we only refer to a positive or negative relation when the inclination on the Y-axis of the slope on the graphs of any given two variables is higher than .1 for a positive relation, and lower than .1 for a negative relation, and the range depicted on the X-axis is larger than 1 for the 1-7 scales regarding compliance and consent, and 2 for the 0-10 scale with respect to regime confidence. Please note that a stricter decision rule (for example with a threshold of 0.2 for the Y-axis and 2/3 for the X-axis) would result in more strict interpretations and hence less reference to relation actually denoting a positive or negative association.

Regarding the interpretation of the graphical plots, please consider the respective scales on the X-axis:

- regime confidence (average of to what extent citizens can be confident that their data/food/financial assets are safe 1-7 scale from completely unconfident to completely confident with 4 as neutral point meaning neither confident, nor unconfident),
- for regulatory consent: the original scale indicated to what extent respondents (a) regarded the regulation in terms of content of the rules and (b) the way of enforcement too strict or too loose average for both items 1-7 scale from way too strict to way too loose with 4 as a neutral point, meaning 'just fine as they are'. This scale has been transformed to indicate whether respondents indeed give their consent to the contents of regulation and enforcement. This scale consists of negative values, which indicate the extent to which actors do not consent. The closer values are to 0, the higher consent is among the respondents. In other words, the 0-point indicates full consent with regulation and enforcement.
- compliance by regulatees (average regarding to what extent respondents perceived the two groups of regulatees are complying with the regulations – average for both items – 0-10 scale where 0 is do not comply at all and 10 is fully comply).

The scale on the Y-axis refer to the network indices discussed above and range between 0 and 1.

Please be <u>aware</u> that the graphical plots often only show a part of the total scale, as values of the involved variables for the 18 sectors often do not range from the theoretically possible minimum value to the theoretically possible maximum value, but only for a more limited range of values. So, readers should be careful not to overestimate the actual relation between variables shown in the graphical plots, as the inclination of the slope shown in the plots looks steeper when depicting only partial scales, than when considering the full scale. In general, just because values of the variables shown only have a limited range, the actual associations between variables should be interpreted as being rather limited in strength.

Please be also aware that actors for which we did not have interview or SNA data are left out of the SNA analyses and this kind of missing data is not taken into account when calculating network indices like density.

#### 3.3.2 Findings: Contacts and regime effects

As we have done with previous analyses, we first focus on how the frequency of contacts affect the assessment of the regime. In the analyses we focus on high frequency contacts, low frequency contacts and no contact. Logically, the density of the contact network refers to the extent to which actor groups have contacted another actor groups. High density networks thus refer to networks in which many actors have a lot of contacts with one another.



Focusing on the relation between the density of contacts and regime confidence first, the figure suggests a positive relation (Figure 7). The networks that tend to have more intensive contacts between actors also enjoy higher regime confidence. Generally, we also see that the networks within data protection score both much lower on both density of contacts and regime confidence. This thus means that actors within the data protection networks 1) have less contacts with other actors in the network and are 1) on average less confident about the regulatory regime. We see this relation in all countries. Interestingly, we see that the Swiss food safety sector have the highest density of contacts indicating that actors within this network are highly connected with one another, and at the same time the highest average of confidence by stakeholders in the regime.



Figure 7: Density of contacts - Confidence

Now looking at the relation between network density of contacts and actors' consent with content of rules and the way of enforcement (Figure 8), we see a very weak positive correlation: the higher density of contacts, the higher the consent (full consent = 0). Generally, we see that networks with lower density (i.e. actors have less (frequent) contacts with one another) also have lower consent values ( < 0 ) with the strictness or looseness of regulation and enforcement, but the relation is weak. Typical networks for which this is the case are Swiss, Polish, and Belgian food safety, Norwegian, Spanish and Swiss finance. Interestingly, we see that data protection scores do not differ in terms of network density in terms of consent from the other networks, as we have seen with regime confidence.





#### **Density of contact networks - Consent**

Figure 8: Density of contacts - Consent

Lastly, turning to the density of contacts and the levels of perceived compliance by regulatees, we see that more contacts between actors in networks somewhat correlates to higher compliance levels (Figure 9) This thus indicates that the more frequent contacts actors have with many other actors in the regulatory regime, the higher compliance by regulatees is according to the stakeholders in the regime. Here, we again see that compliance is considered to be generally lower in the sector of data protection. Only in the financial sector in Spain stakeholders regard compliance to be more limited. As shown above, the Spanish sectors vary to a great extent on all regime effects covered here. The other networks, both in terms of sectors and countries, tend to be rather dense (between .6 and .75) in terms of contact and rather well-complying (between 7 and 8).



Figure 9: Density of contacts - Compliance



In summary, we see that the density of contacts between actors in specific regulatory regimes positively correlate with stakeholders' confidence in the regime and their perception of compliance of regulatees. We see a positive relation between contacts and regulatory consent. The graphs above also highlight the differences between finance and food safety on the one hand and data protection on the other hand. Here, the latter sector scores lower on the density of contacts between actors, as well as on regime confidence and compliance. This means that actors within the data protection sector have considerably less contacts with one another, but also have less confidence in the regime and report compliance to be on average somewhat lower. This might be explained by the fact that the regulatory regime of data protection is relatively new and less mature, especially when compared to finance and food safety.

#### 3.3.3 Findings: Information sending and regime effects

Having discussed the density of contacts, we now turn to the information sending networks. As discussed above, when analyzing actors' information sharing efforts, we distinguish between the sending of information and receiving information. Similar to the contact networks, we also created 18 networks based on actors' reported information sending practices. High density of these networks means that many actors send information to other actors in the network. Low density then refers to networks in which a small number of actors send information to one another.

Modelling the networks on a two-dimensional grid of network density and regime confidence, the figure below shows us that there is a positive correlation between networks of actors that send information and the extent to which these actors are confident about the functioning of the regime (Figure 10). Again, we see that data protection scores are relatively lower, not only in terms of regime confidence (as also discussed above), but also on density of the information sending networks. This thus means that in the data protection networks less actors send information to one another compared to actors in the other networks. Interestingly, the Spanish networks for data protection and food safety have the lowest density, indicating that only a small number of actors send information to their peers, but the Spanish food safety sector does show high levels of regime confidence.



#### **Density of Information Sending networks - Regime confidence**

Figure 10: Density of information sending - Confidence



Turning to consent (Figure 11), we again see that actors within networks with high network density also tend to have higher consent scores (full consent = 0). Here, we do not see a big difference between the various sectors: although the networks within data protection are still less dense in terms of information sending than the other networks, in terms of consent the networks are quite similar. In some cases, we do see that networks in which actors tend to send information to fewer actors, also their regulatory dissent is higher (e.g. Norwegian and Swiss data protection and Polish finance.



Figure 11: Density of information sending - Consent

When plotting the network densities and levels of perceived compliance against one another, we notice a clear positive relation between compliance and information sending (Figure 12). Also, in terms of compliance, we see that actors within data protection networks tend to perceive compliance in this sector somewhat lower than actors in other sectors. The Swiss data protection sector score lowest on this metric and the Polish finance the highest. Then, in terms of the information sending network density, we see that the Spanish and Swiss data protection sector, and the Spanish food safety sector score lowest of all networks, meaning that only a few of (different) actors send information to other actors in these networks.





#### **Density of Information Sending networks - Compliance**

Figure 12: Density of information sending - Compliance

In short, we see positive relations between the information sending practices of actors and their perception on the regime. As more actors send information to other actors in the networks, we see that, on average, the networks' actors also tend to report a higher confidence in the regulatory regime and that actors that are more satisfied with the regulation and enforcement. We also see such an effect in terms of compliance: the more information is sent to actors, the higher compliance levels.

#### 3.3.4 Findings: Information receiving and regime effects

Of course, actors can also receive information from other actors in the network. We present the density scores and regime effects per network below again. High density networks refer to networks in which a high number of actors receive information from a lot of other actors.

First, plotting network density of the information receiving networks and the actors' confidence in the regulatory regime, we see a positive relation (Figure 13). This thus means that the more actors receive information from other actors in the network, the more confident these actors are in the regulatory regime. A striking case is the Swiss food safety network, which scores very high both on regime confidence and density of information sending between actors. This indicates that in this sector a lot of actors indicated to have received information from a lot of other actors, and that in this sector, on average, actors report that citizens can be confident that the food they eat is safe. We also see that in several countries the data protection networks in general tend to be less dense in terms of information sending: again highlighting the relative lack of interactions between actors in this sector. For example, actors within the German and Spanish data protection sectors also received less information from their peers, as demonstrated by their low-density index, which is partially explained by the legal framework and the multiple levels involved due to their federal state structure. In general data protection sectors sore also relatively less well in terms of confidence in the regulatory regime. Please note that all three sectors in Belgium score quite high in terms of density of information sending between actors, but regime confidence is more modest in data protection.





#### **Density of Information Receiving networks - Regime confidence**

Figure 13: Density of information receiving - Confidence

Next, looking at regulatory consent and the density of the information receiving networks (Figure 14), we see similar results as with the information sending networks shown above. Generally, and in most countries, the finance and food safety sectors tend to be both moderately to highly dense in terms of information receiving, and actors within these sectors see the content of rules and the way of enforcement as close to 'fine as they are - 0'. As a result, we see that lower density scores again relate to lower (i.e. < 0) consent scores.



Figure 14: Density of information receiving - Consent

Lastly, turning to compliance by regulatees, we clearly see two types of networks (Figure 15). On the one hand, we see that in the food safety and finance networks (except those of Spain and Poland) a lot of actors have received information from many other actors, and also think regulatees in their sector comply to a high extent. Compliance is much perceived to be lower in data protection, and also less actors indicate to have



received information from their peers. This again highlights the low interconnectedness within data protection networks, which might be explained by the fact that on the one hand it is a less mature regulatory regime and information sharing relations still need to deepen. Also, as data protection is a transversal regulation, applying to all economic and societal fields, there are a lot of different actors that have to deal with data protection. This makes that actors naturally have less interactions with one another, especially when it comes to information sharing.



Figure 15: Density of information receiving - Compliance

In summary, the plots suggest that the density of information receiving between actors in specific regulatory regimes positively correlate to some extent with stakeholders' confidence in the regime and their perception of compliance of regulatees. We also see a negative correlation between density of information receiving and regulatory dissent.

#### 3.3.5 Findings: Converging / diverging views and regime effects

The next variable that we focus on is whether actors within the networks perceive that they have similar or different views with other actors in the network. As mentioned above, we especially make a distinction between having the same views (convergent) or having different views (divergent). We again plotted these variables with the regime effects. For the sake of simplicity, we ignore the cases in which actors have sometimes similar and sometimes different views with one another (the middle option in the answering scale). The networks' density scores are thus calculated on varying numbers of actors, as an actor that indicated to have mainly similar views with an actor will only be included in the convergent network, and thus not in the divergent network.

#### 3.3.5.1 Convergent views and regime effects

We again calculated for every network the density scores. High density reflects the situation where many actors indicated that they have mostly similar views with many other actors in the network. Low density reflects the situation where a few actors indicated to have similar views with only a small number of other actors.

Plotting these density scores on view convergence (Figure 16), we first see that the density of the networks is somewhat lower than we have seen for the other interactions (contact, information sharing). Most networks have a density score between .15 and .35, whereas this was higher in the other networks.



Interestingly, the Polish food safety sector scores high on network density, thus indicating that a lot of actors within this sector tend to have similar views with other actors. Whereas in the above analyses we saw a clear distinction between data protection and the other two sectors, this is less reflected in the density scores of the convergent views networks. Data protection still scores lower on regime confidence (as seen above), but this does not necessarily correlate with lower density.



Figure 16: Density of convergent views - Confidence

There is no clear effect between network density of view convergence and consent (Figure 17). Here, we first see that generally, data protection had somewhat lower density scores indicating that actors within these networks have similar views with relatively fewer other actors. Also, the density scores of the food safety and finance networks of Switzerland are relatively low. Interestingly, the network density of the Polish food safety sector is rather high, and actors within this network rate rules and enforcement to be close to 'fine as they are'.





#### Density of Views (convergent) networks - Consent

Figure 17: Density of convergent views - Consent

Turning to actors' perception on compliance of regulatees within their sector, we also do *not* see a clear relation (Figure 18). Actors perceive that regulatees comply to a rather high extent (between 6 and 9). Perceived compliance is especially high in the networks of Polish finance, Polish food safety, and Norwegian finance, and Swiss food safety. Yet, only the networks of Polish finance and Norwegian finance are also highly dense in terms of convergence of views - meaning that actors indicate to have similar views with a lot of other actors – while the other two sectors have much less actors stating to share similar views with other actors in the regime. Interestingly, a number of networks in food safety (Belgium, Germany, Poland and Norway) are characterized by a relatively high network density, indicating that actors tend to have similar views with other actors in the network, and rather high compliance levels.



Figure 18: Density of convergent views - Compliance



In sum, we can conclude that convergent views do not clearly correlate with regime effects. We see that in general density is quite low: actors tend to have similar views with only a limited number of actors. Yet, in some extreme cases (in particular networks within food safety) the high degree of convergent views also corresponds with a (relatively) high level of compliance and regime confidence. We also again see that actors in data protection networks tend to have similar views with less actors compared to other sectors. This might be explained by the fact that data protection is less mature as regulatory regime and affects as transversal regulation numerous different actors across economic and social domains, that do not necessarily have to deal with one another.

#### 3.3.5.2 Divergent views and regime effects

Having discussed the convergent views, we now turn to divergent views. In this case, high density networks refer to networks in which many actors indicated to have (mostly or often) different views with a lot of other actors in the network. Logically, we would expect that this has a negative effect on regime effects.

Looking at regime confidence first (Figure 19), we see that there is *no* clear evidence of a negative relation between the density of the divergent views network and regime confidence. We see that when regime confidence is high, as is often the case for networks within food safety and finance, the density of view divergence networks tends to be somewhat higher, but the differences are very small. The networks of data protection, which enjoy less regime confidence, also show no clear patterns in terms of their density regarding divergence of views, as there is much variation. The networks of Norwegian and Polish food safety, and Polish and Spanish data protection show a network density that is close to 0, indicating that actors within these networks do not think their views diverge from other actors in the network. The opposite is true for Swiss food safety, which has the highest density score.



Figure 19: Density of divergent views - Confidence

We do not find convincing evidence that would suggest a correlation between diverging views and regulatory consent (Figure 20). Indeed, most networks have low density scores, but do show variation in terms of regulatory consent. Except for the high-density scores of the Swiss food safety network (see above), we cannot find other compelling evidence that might support our hypotheses.





**Density of Views (divergent) networks - Consent** 

Figure 20: Density of divergent views - Consent

Lastly, turning to the relation between diverging views and compliance, we see a very similar image as the graph of consent above (Figure 21). As the network density scores tend to vary only slightly, we do not see a clear negative nor positive pattern in the data points. We also see here that the networks of data protection are not performing (much) worse than other networks.



Figure 21: Density of divergent views - Compliance

Summarizing the findings on divergent views, we cannot conclude that actors having different views with their peers has a negative effect on how actors perceive the regulatory regimes. This might indicate that having different views vis-à-vis other actors does not affect the way the actors perceive the regime as such. Likewise, as we have seen in previous analyses (see section 2.3 in this report), the relation between actors having different views does not necessarily mean that these actors trust one another to a lesser extent. In



some cases, having different views goes together with a high level of trust between actors. This might further explain the non-findings presented above.

#### 3.3.6 Findings: Trust network and regime effects

Next to the interactions, we also made networks based on trust and watchfulness. In these networks actors are connected with one another if they trust one another to a high extent (indicated 7 or higher on an 0-10 point scale which measures trust). When actors trust one another moderately, or to a low extent, they are not connected with one another. For these high trust networks, we again calculate their density. High density reflects the situation in which many actors indicate to have high trust in many other actors in the network.

Focusing on the relation between density of the high trust network and actors' confidence in the regime, we first see a rather strong positive correlation (Figure 22). As we have seen before, the networks within data protection are much less dense than the other networks, that is also the case with the high trust relations. This thus means that many actors within the data protection networks do not have high trust in many of the other actors. Additionally, the low density might also be explained by the fact that in the data protection sector a wide array of actors is involved, as data protection is a transversal regulatory space and with the nature of the risk involved (protection of data). Yet, we also see low density of high trust relations in the networks of German food safety, Polish finance and Spanish finance, but mainly the latter sector shows more limited levels of regime confidence (on average, actors perceive that citizens should be 'neither confident nor unconfident' that their financial assets are safe). Interview data highlights that within the German food safety regime, actors had less dense high trust relations among each other as the regulatory regime in this federal country involves actors across government levels, with the federal regime only setting general guidelines and with the lower governmental levels involved in enforcement, resulting in less dense high trust relations. Interestingly, in the Norwegian financial and food safety sectors, we find rather high density of high trust relations, thus reflecting that actors have high trust in many of their peers. Similarly, the actors in the Belgian networks also tend to have high trust in many other actors. For these latter sectors we also see high levels of regime confidence.



Figure 22: Density of high trust - Confidence

Plotting network density and regulatory consent, we see high variation across both dimensions (Figure 23), showing that there is *no* strong evidence of a relation between these variables. Of course, we again see that



the Norwegian and Belgian networks within food safety and finance are highly dense, yet actors within these networks are much more dispersed when looking at regulatory consent.



Figure 23: Density of high trust - Consent

The graph depicting the relation between network density of the high trust networks in relation with the average perceived compliance by regulatees, shows a positive relation (Figure 24). We clearly see that as actors tend to trust more actors to a high extent, this corresponds with actors' perception that compliance in that sector is higher. We especially see this within the food safety and finance networks. In the data protection networks, we see the opposite: less actors tend to have high trust in less other actors, and that goes together with a perception of compliance to be lower. That said, we also see low network density of high trust for the German food safety sector, the Polish finance and food safety sector, and the Spanish finance sector, but the average perception on compliance in these sectors is quite different.



Figure 24: Density of high trust - Compliance



In summary, we can conclude that in sectors in which many actors have high trust in many other actors, actors are 1) more confident about the regulatory regime itself – more precisely there is a perception that citizens should be confident that the regime is keeping them safe from harm -, and 2) perceive a higher compliance of regulatees, as perceived by actors within the sector itself. This is interesting as it supports some of the previous mentioned findings. However, there is no clear relation between having many actors with high trust in many other actors in a sector with the extent to which the actors in this sector express consent with the content of rules and with the way regulation is enforced.

#### Findings: Watchfulness and regime effects 3.3.7

Similarly to the high trust networks, we also constructed networks based on high watchfulness scores (7 and higher on an 11-point scale). A high density of high watchfulness networks refers to the situation in which many actors tend are highly watchful towards many other actors.

Turning to the density scores of the high watchfulness networks in relation to regime confidence first (Figure 25), we see a widely scattered plot. Please note first that overall the range of density scores for high watchfulness networks goes only up to 0.5 and this range is smaller compared to the density score for high trust networks, implying that high watchfulness relations are less prevalent than high trust relations. Interestingly, the density of the high watchfulness networks does not show clear sectoral patterns.

Here, the Swiss food safety network is highly dense: meaning that actors tend to be highly watchful toward many different actors. Also the Belgian finance network and all German networks are relatively denser. The opposite is true for all Norwegian networks, as well as for the Belgian data protection network, in which density of the networks is minimal. Yet, this does not clearly correlate with actors' perception on regime confidence. But it is clear that even in sectors where the average regime confidence is high, there might be quite some actors having high watchfulness towards other actors. To some extents this suggests support for the finding in section 3.2 where we found that combinations of high trust and high watchfulness between actors have a positive effect on perceived regime performance (both regime confidence and compliance).



#### Density of high watchfulness networks - Regime confidence

Figure 25: Density of high watchfulness - Confidence

Turning to density of high watchfulness networks in relation to regulatory consent, we again see that the density scores and regulatory dissent scores vary highly (Figure 26). As a result, we do not see a clear pattern between these two variables.





#### Density of high watchfulness networks - Consent

Figure 26: Density of high watchfulness - Consent

Lastly, turning to density of high watchfulness networks and perceived compliance levels, we see also do not see a clear correlation (Figure 27). Although compliance levels are generally lower for data protection, this does not correspond with lower network density per se. This thus reflects that high watchfulness between actors within networks does *not* have a clear effect on the way actors perceive compliance within their sector.



Figure 27: Density of high watchfulness - Compliance

In summary, we can conclude that the relation between dense high watchfulness relations and regime effects is less pronounced than some of the other relations we have discussed above. In general, we do *not* see clear patterns as we have for example seen with the high trust networks. This seems to corroborate some of the findings previously discussed in this report, being first that trust and watchfulness go together in all kinds of combinations (see section 2.1 and to some extent section 2.2), and second that it is mainly the ways in how



trust and watchfulness combine that influence regime performance (regime confidence and compliance) and regime legitimacy (consent) (see section 3.2).

### **3.3.8** Conclusions: To what extent do interactions and trust/watchfulness relations affect regime effects (regime confidence, regulatory compliance and consent)?

In this section we analyzed the relationship between interactions and trust/watchfulness relations with regime effects, specifically regime confidence, regulatory compliance, and consent. The study finds a positive correlation between the density of *contacts* between stakeholders and stakeholders' confidence in the regime. We also find a negative relation between regulatory consent and the density of contacts. Lastly, perceived compliance of regulatees correlates with the density of contacts. The analysis also shows that the data protection sector scores lower on density of contacts, regime confidence, and compliance, indicating that actors within this network have fewer contacts with one another, lower confidence in the regime, and report lower compliance levels. The findings suggest that the regulatory regime of data protection is relatively new and less mature compared to finance and food safety.

Furthermore, the study finds a positive correlation between networks of actors that *send information* and the extent to which these actors are confident about the functioning of the regime. However, the data protection networks score relatively lower on the density of the information sending networks. Interestingly, the Spanish networks for data protection and food safety have the lowest density, indicating that only a small number of actors send information to their peers. The analyses also suggest that the density of *information receiving* between actors in specific regulatory regimes positively correlate to some extent with stakeholders' confidence in the regime and their perception of compliance of regulatees. At the same time, we see that as actors send information to more actors in the network, this also corresponds with lower levels of regulatory dissent. Overall, the research emphasizes the importance of network density in terms of contacts and information sharing between regime stakeholders in shaping stakeholders' confidence in the regime and compliance levels.

Our analyses show that most networks have low to moderate density scores regarding *convergence of views*, indicating that actors tend to have similar views with only a limited number of other actors. Some networks within the food safety sector (e.g. Poland, Belgium, Germany and Norway) are an exception, with a high-density score indicating that a lot of actors within this sector tend to have similar views with other actors<sup>21</sup>. We do not find a clear correlation between convergent views and regime effects. As to density of networks of *divergent views*, we did not find any evidence to suggest a correlation between many actors having divergent views and regulatory consent or compliance. The density scores tend to vary only slightly, and the networks of data protection are not performing worse than other networks. In general, we did not find a clear relationship between network density of both convergence and divergence of views and regulatory effects.

We can however conclude that in sectors in which many actors have *high trust* in a lot of other actors, actors are 1) more confident about the regulatory regime itself – more precisely there is a perception that citizens should be confident that the regime is keeping them safe from harm -, and 2) perceive a higher compliance of regulatees, as perceived by actors within the sector itself. This supports some of the previous mentioned findings. However, we do not find a clear relation between dense *high trust* relations and regulatory consent. The relations between dense *high watchfulness* relations and regime effects are less pronounced and we do not see clear patterns. This seems to corroborate some of the findings previously discussed in this report, being first that trust and watchfulness go together in all kinds of combinations (see section 2.1 and to some extent section 2.2), and second that it is mainly the ways in how trust and watchfulness combine that influence regime performance (regime confidence and compliance) and regime legitimacy (consent) (see section 3.2).

<sup>&</sup>lt;sup>21</sup> Interview data in Norway suggests that specifically market-oriented actors (such as regulatees and interest groups) have highly overlapping views, but that is less the case for consumer-oriented actors.



### 4. Conclusions and recommendations

### 4.1 Sectoral conclusions

In this section we zoom in on the main findings and conclusions per sector, taking also the qualitative findings of the sector studies into account (see D3.1), besides the findings discussed in this report.

#### 4.1.1 Main lessons on data protection

A comparative analysis of data protection regimes across several countries reveals some common themes and areas for improvement.

Data protection as a regulatory regime has some specific features which distinguishes it from the other sectors. First of all, data protection regulation concerns transversal regulation, applying to all economic and social sectors, implying that the regulatees are encompassing all societal actors (public, private, non-profit and citizens themselves), and hence enormous in number and in variety. Data protection also regulates a very intangible good, being safety of data and privacy, which, compared to food safety and financial regulation, is much less well measurable and observable, technically harder to understand (because of digitalization of data exchanges), and risks and breaches are often not directly noticeable. Data protection regulation is with the introduction of the encompassing and principle based GDPR also very young, and interpretation of this regulation is still in the process of further crystalizing itself, on the side of regulatees and beneficiaries, but also within and between regulatory authorities and levels. Also in countries with well-developed data protections regulations which existed before the introduction of GDPR, there is still a similar dynamic of ongoing integration of and change to GDPR with issues around harmonization of interpretations and enforcement.

This also means that the data protection regulatory regimes are less mature, still settling itself and in flux, both in terms of content but also in terms of actors and their roles. The regulatory agencies are either rather newly established or in case they existed before as privacy commissions and the like, have taken many new and highly complex tasks upon them, often while resources have not increased to the same extent. Hence the regulatory agencies in most countries have focused on the previous years upon getting their tasks, internal capacities and functioning as well as communication adapted to manage the implementation, supervision and enforcement of the GDPR. Such a situation implies that they have focused less on aspects which are often in more mature sectors with more established regulatory agencies more developed, like participation of and communication to interest groups, consumer associations and regulatees. But also all the other actors, including politicians, ministries, regulatory intermediaries (often still absent in this sector), but also regulatees, interest groups and consumer associations, are still in the process of learning about the implications of new data protection regulations, getting themselves organized in terms of searching and developing the needed expertise, capacities, procedures as well as exploring the roles they can or should take in this regulatory regime. Actors still need to position themselves in the regulatory regime, get to know and to interact with the other actors, and need to align with other actors about the exact interpretation of the regulations and the roles of the different players to make the regulatory regime functioning smoothly and effectively. For example, interest representation of both regulatees and consumers is still developing, as clear and as being legitimate accepted interest groups and consumer associations, defending the regulatees and consumers/citizens in terms of data protection are only starting to emerge. Certainly, well-resourced and experienced consumer associations which focus sufficient resources and actions on data protection are in most countries still rather hard to find. Also, and more pronounced than in other sectors, the differences in resources between small and large companies to implement GDPR results more strongly in a diverging capacity to comply.

These features of a less mature regulatory regime, which still needs time to settle and institutionalize itself, add complexity and uncertainty, when compared to more mature regulatory regimes as in the sectors of finance and food safety. Clearly the data protection regime in all countries has improved and citizens can feel



safer now than five years ago. While most countries are still working on GDPR implementation in all sectors of society, they all have improved their regulations and the confidence in the regulatory regimes is growing and on average, from a moderate to a rather high level. We observe that the actors under investigation have a relatively good consideration of the data protection regime. In this respect, the actors seem to agree on the functionality of the regime. However, trust between actors in the regime varies substantively across and within countries. Actors in all countries have a generally positive view on the (evolution of) the data protection regime, but there is a need for more dialogue and cooperation to improve understanding and compliance. Trust levels in the sector are generally moderate to high, but some actor types, such as consumer associations, have lower trust in most actors. This lack of trust in other actors is often related to a perception of limited expertise and knowledge about data protection both from at the side of the trustor and the trustee. Except for the regulatory agencies themselves, the knowledge and expertise about the complex data protection regulation is perceived to be still rather limited. Legislative politicians may be isolated from the data protection sector, making it difficult for them to gain the expertise needed to build trust. In some cases, we also found that the topic of data protection is split across parliamentary committees (such as Public Health, Competition or Digitalization, making data protection an additional (and not main) topic for politicians. On the side of regulatees, our data collection focuses on two kinds of regulatees, being hospitals managing personal health data and internet companies, managing electronic communication. When studying trust and compliance perceptions of other actors towards these regulatees, it is noticeable that in general compliance by internet companies is scored somewhat lower than hospitals, although it is recognized that the internal expertise and capacity to deal with data protection is often more sizeable in the former than in the latter regulatees. Also trust levels are generally lower in internet companies than hospitals, which seems to be more a reflection of the broader concerns that digital companies might be misusing personal data (see recent debates about data protection by big tech companies), than a reflection of actual differences in compliance. Yet, the concerns as also reflect the worry that internet providers might have financial benefits when misusing data of customers, while hospitals do not. Also, hospitals have more experience with handling personal data, due to professional confidentiality of medical personnel.

Regulatory agencies are often well-trusted for their expertise and competence, but less for their openness to dialogue and guidance. One notable issue is the limited accessibility to regulatory agencies, with many actors finding it difficult to access guidance on regulatory interpretation. All market participants in these countries share the view that data protection legislation may be difficult to interpret, highlighting the need for more discussions and joint interpretation of regulatory laws, and more guidance is needed to interpret regulations and improve compliance, also because of the strong emphasis of the GDPR on companies performing risk assessments themselves. Improvements are needed in terms of flexibility for small regulatees to comply with regulations and more spaces for participation, dialogue, and collaboration in decision-making processes. Additionally, attention should be given to spread awareness about GDPR to improve general compliance. Federal and other countries in which multiple regulatory authorities are active for different levels or societal domains should be careful to avoid different interpretations by these authorities. Also, regulatory agencies should invest more in opening up to stakeholder participation in the development and implementation of regulations, by creating platforms for exchange and mutual learning (like advisory groups or consultation procedures).

From the analyses presented in this report (see section 3.3), it is clear that data protection sectors across the countries score generally lower on the density of contact, information sharing and convergence of views between stakeholders in the regulatory regime and have more moderate scores on confidence in the regulatory regime and compliance, compared to finance and food safety sectors. In terms of consent with the content of rules and enforcement, average perceptions are ranging between slightly too strict (mainly in terms of content of rules) to slightly too loose (mainly in terms of enforcement). Because GDPR is not so well-known in all its implications, and because regulatees need time and resources to get their internal procedures right, regulatees fear the threat of data breaches and complaints, resulting in inspections and potentially large fines.



Overall, the data protection regimes in these countries are considered functional, but there is room for improvement in terms of guidance, transparency, and dialogue. Trust levels are generally high, but some actor types may have lower trust in the system. The regulatory agencies should in the future shift their focus from getting the internal functioning and procedures for implementing the data protection regulation right to working towards improving accessibility and flexibility while providing more spaces for dialogue and collaboration to improve relationships between actors. There is the need that in data protection regimes, the different stakeholders get to know each other, and each actors' role, and come to a shared understanding of effective data protection regulation and enforcement and start to form a genuine regulatory community. One recommendation might also be to establish regulatory intermediaries or certifiers to better inform consumers and to provide regulatees with a set of requirements and regular follow-up.

#### 4.1.2 Main lessons on the regulatory regime in the financial sector

In most of the countries we studied, the financial sector is characterized by rather frequent and intense interactions between most of the actors. Both the regulatory authorities, ministries but also stakeholders such as interest groups and regulatees have often frequent contacts and information sharing with one another. In three countries density of contacts and information sharing is high, in three other countries (mainly Poland, Switzerland and to a lesser extent Spain), although the density of interactions is still at a moderate to rather high level, intensive interactions between actors are less present and more concentrated in a limited set of actors. Also the density of high trust relations follows more or less these patterns. This is also reflected in the level of confidence stakeholders have in the overall regulatory regime: while this is on average high in all countries (including Switzerland), on average regime confidence is somewhat lower in the Polish (but still rather high) and the Spanish financial sectors (being still at a moderate level). In terms of average perceptions of regulatory consent and compliance, these are quite high, except in Spain where perceptions are that regulations and enforcement are too loose and regulatees are moderately complying. Switzerland is a special case with on the one hand intensive interactions and high trust relations among a narrower set of actors, confirming the club-like structure of the regulatory regime in this sector, with a relatively small number of cohesive actors holding crucial positions and with the private sector deeply integrated in the regulatory process. On the other hand, this sector scores among the highest in terms of confidence, compliance and consent. While the prevalence of high trust relations between the stakeholders for most countries align with the way stakeholders evaluate the regime, the prevalence of high watchfulness between actors in some countries like Belgium, Switzerland and Spain, or the absence thereof in Norway, do not seem to have clear effects on how well the regulatory regime performs. However, we learn from the analyses in section 3.2 that the combination of high trust and high watchfulness, in the form of watchful trust, correspond with perceptions of high regime performance.

Overall, the regulatory agencies are seen as highly competent. In most countries, there is a high level of trust in the regulatory regime, with strict regulations and good enforcement being viewed positively (e.g. in terms of safeguarding better the society, institutions and consumers against financial crises). However, in some countries, for example in Germany, regulations are perceived as overly complex and nontransparent, and communication by the financial regulators is considered insufficiently clear, leading to calls for clearer guidance and more educational activities. In this context, more concise information sending policies, as well as direct communication beyond one-way information sending, may help ensure compliance and future cooperation of regulatees and other actors in the market.

Often, regulatory consent as well as the trust levels towards specific actors varies amongst the different actor groups, with on the one hand the interest groups and regulatees considering the enforcement as well as the content of regulation as being rather strict, and on the other hand consumer associations perceiving the enforcement as rather loose. The latter have in several countries a less positive view of the financial regulations as consumer associations see them as complicated, and not serving consumers optimally. In this regard, there is a need for more dialogue and inclusiveness in the regulatory process, particularly by empowering consumer associations and civil society representatives through information and expertise-



building in order for them to play a more active role in the regime. In that way inclusiveness and a more pluralistic participation can be fostered.

While the finance sector as a mature sector has well-established roles for all actors, including formalized and legal obligations, and often good contacts between regulatory agencies and established regulatees such as banks, new players like fintech companies in the finance sector often face difficulties in navigating the complex regulatory landscape. One of the common criticisms of the regulatory framework and the regulatory agency concerns the fact that the legislation and enforcement of it is not always up to date with respect to technology. There is the necessity of the regime to adapt its regulation to the new financial technologies and products and the changing economic scenario. These new players often call for more guidance and differentiation in regulation. The fintech sector is seen as less well-complying and which is less trusted by other actors, compared to banks as regulatees, may need to be more appropriately monitored and regulated, but this should be done clearly, concise, and transparent to ensure compliance and future cooperation. Additionally, in some countries there is a specific need for more expertise and knowledge about fintech and technological developments in this field. Regulatory agencies might want to make more efforts and invest more intensively in such knowledge as to ensure regulation is in line with technological advancement and the practices of the fintech sector.

Overall, transparency, communication, dialogue, inclusiveness and openness are vital in building trust in the financial regulatory regime, especially towards new players and actors defending consumer interests with less resources and expertise compared to the more established interest groups of banks.

#### 4.1.3 Main lessons on the regulatory regime in the food safety sector

The food safety regimes in various countries share some common strengths and weaknesses. Generally, actors in the food safety sector have a common goal of ensuring food safety, which increases trust and confidence in the regulatory regime. Confidence in the regulatory regime is on average in most countries rated as high or rather high, and compliance is on average seen as high. In most sectors on average the actors consent with rules and enforcement, considering them to be between 'just fine as they are' and 'slightly too loose', but in Spain rules and enforcement are perceived as too strict. The food safety sector in Spain stands out, as it has the lowest density in terms of contacts and information sharing between regime stakeholders, whereas in most countries, food safety as a mature sector sees dense to rather dense interaction patterns between many actors. However, Spain has rather dense high trust patterns between actors, which are matched by watchfulness. The low interaction but high trust and watchfulness can be explained by Spain's federal structure. In this federal system, actors are active on both the national and regional level and thus do not interact as much as in other countries. Also, an important factor that negatively affects consent in Spain, is that although the national regulator is praised for its professionalism and high technical standards, regulators at different levels of government have different interpretations of regulations. This differentiation creates complexity and uncertainty and might explain the higher levels of watchfulness towards actors in the regime. Similar issues in terms of insufficient uniformity in the monitoring practices, the application of rules and enforcement practices is raised in Germany where the drafting of regulation and the execution take place on different government levels. Yet, this lack of uniformity was also to some extent visible in a unitary country of Norway, where respondents indicated a wish for more national guidelines for interpretations for all the regional branches of the regulatory agency. In order to address this concern, the Norwegian regulator has been restructured and is making strong efforts in training their staff to apply regulation consistently throughout the country. Similar efforts have been made in the Spanish food safety sector. These issues are less present in the federal countries of Switzerland and Belgium as they show patterns of high regime confidence, compliance, and consent, which are linked to dense interaction patterns between many regime stakeholders, (rather) dense trust relations, and in case of Switzerland relatively dense watchfulness patterns. So in several countries, there is a need for more uniformity in the monitoring practices, application of rules, and enforcement practices.



Regulatory agencies in food safety are generally seen as trustworthy. Regulators increasingly perceive and treat producers as professional and knowledgeable stakeholders, and their businesses as dynamic organizations. One of the challenges for regulators is to have more consideration of the regulatees' individual circumstances and to employ this information when making regulatory assessments. Regulators could also provide smaller regulatees with sufficient resources to comply with regulations. This comprises to provide information in languages other than the national language to tackle the needs of non-domestic producers or retailers. Regulators could also improve communication between various subsectors. This may be even more relevant when it comes to "best practice" learning that hardly takes place, as the interest groups of the respective industries usually work independently and do not share much information themselves.

Consumer associations have the most negative opinion about the food safety regime functioning. They often argue for stricter regulations than other actors, and this may explain why they have lower trust in general towards most actors. In this sense, in some of the countries, the further building of a regulatory community consisting of consumer groups, interest groups, regulatees, and regulators might improve the regime's functioning. In some countries, there has been much improvement in developing and sustaining an open dialogue with the different stakeholders and interests, but in other countries, more focus on discussions, dialogue, and cooperation could improve the functioning of the regimes. Please note that in several countries, because of the auto-control systems, regulatory intermediaries have an important role as 'middlemen' between the regulator and regulatees. Therefore, it is crucial that they are considered to be sufficiently trustworthy by all actors in the regime and they are part of this regulatory community in order to play their part well.

Finally, opening the regime through more information provision to external stakeholders could make it more externally impactful. The regime could be more transparent about its practices and provide more information to consumers and other external stakeholders. This could increase trust in the regulatory regime and lead to better compliance with regulations.

In conclusion, the food safety regimes in various countries have some strengths and weaknesses. By improving communication and cooperation among actors (also horizontally between e.g. different actors in the single federal states), providing more support to smaller regulatees, and increasing transparency, the regulatory regime could be improved to better ensure the safety of the food supply.

### 4.2 Main lessons and recommendations on interactions, trust and effects in regulatory regimes

#### 4.2.1 Main findings

In this TiGRE Deliverable, we report on the findings of WP3. In short, WP3 studies to what extent dynamics of trust and distrust in terms of watchfulness between stakeholders in regulatory regimes are related to interaction (and cooperation) among these stakeholders, within and across levels, and how this interaction influences perceptions of regulatory consent, compliance and regime confidence among the stakeholders of regulatory regimes. We analyze these questions through in-depth case studies of specific regimes, encompassing document analysis, as well as in-depth interviews and social network analysis techniques. Using these various data, we can infer the causal relations between interactions and levels of trust as well as regime performance.

First, we find that trust is largely determined by personal predispositions, attitudes, and sector and country features. Also repeated trustworthy behavior and intentions positively affect trust among actors. Interactions (such as contacts, information sharing and having similar/different views) among actors relate clearly and positively to trust levels between actors, but less so towards the regulatory agency. Whereas we see significant relations between trust and interactions, this is less clear for the relation between watchfulness and interactions.



Furthermore, the trustworthiness of regulatory agencies positively affects the perceived performance of a regulatory regime in terms of keeping the citizens safe from harm and bringing the regulatees to comply. Yet, we also find that contextual factors matter, especially in the case of a lack of trust towards the agency. Based on survey data, we find that high trust relations towards regime actors is positively related with both the performance and legitimacy of a regulatory regime. Yet, we also find that 'watchful trust' (in terms of high trust combined with high watchfulness) improves performance more, and that high watchfulness relations weakens the legitimacy of the regulatory regime. The legitimacy of a regulatory regime refers to the extent stakeholders find the procedures and the way decisions are taken appropriate and legitimate, even in case they do not agree with the content of decisions taken. Additionally, using social network analysis, we find that more dense high trust relations, relate to higher regime performance. The effect of dense high trust relations and dense interactions among all actors, including regulatees, interest groups, and consumer associations, relate to higher regime on the legitimacy is also mostly positive, but rather weak and not univocal.

Lastly, we also identify variation across the studied actors, sectors and countries. First, we find that consumer associations are in many sectors the most critical towards other actors in the regime. Also, they are more detached from other actors as they have less interactions. We thus see the need for increased empowerment of and interactions with consumer associations, so that they can fully play their role in defending consumers' and users' interests. Trust in legislative politicians is often relatively lower, often because to their limited expertise and knowledge about the regulatory issues at play. Second, data protection is associated with lower levels of regime performance, less dense trust and watchfulness relations, and less dense contacts and information sharing. The sector is less mature, and actors are still looking for their role. As a result, some regulatory agencies have primarily focused on getting their internal organization and procedures right and building up their expertise, capacity and enforcement experience. At the same time, the agencies have focused less on their investments in interactions with regulatees, interest groups and consumer organizations as well as with relevant other public actors. In contrast, finance and food safety have higher levels of performance, more dense trust and watchfulness relations, dense contacts and information sharing, and more pronounced coalitions of similar or different views. These are mature sectors, with actors who know each other and play their roles, and share information with each other. In turn, this leads to more nuanced and better-informed assessments. In these sectors, different views do not matter for trust, as long as there is respect for each other's roles and capacities. Finally, we also find that country-specific factors, like the countries' general level of trust in public institutions, affect trust and watchfulness between actors and in the regime. We also see that federal countries are more complex, with differentiated interactions between actors within and between levels of government and its effects on trust in actors and in the regime.

#### 4.2.2 Recommendations

Based on the extensive data collection efforts of the TiGRE project, we can conclude that generally all investigated regulatory regimes are functioning (rather) well. Across sectors and across countries, we first find that actors are generally rather positive about the regimes and the functioning of regulation in their respective sectors. Although we see some cultural differences in the regimes in the quantitative data, the qualitative data highlights that actors believe the regulatory regime ensures compliance of regulatees, and most importantly, ensures safe products or services for citizens. Moreover, we could not find clear evidence of gross violations of trust or clear distrust in the data we collected. Although we have found some sectors in which actors are highly watchful (and sometimes also not trusting) specific actors, this does not paralyze the regime as such. This highlights the generally positive state of the various regulatory regimes under study. At the same time, however, we also find four overarching lessons which arose across the sectors and countries. Particularly, we found that regulatory regimes could improve on the following aspects: stakeholder involvement, regulatory guidance, differentiation between regulatees, and communication and outreach.

First, in various sectors, actors stressed the importance of participatory instruments which allows agencies to involve stakeholders in their decision-making processes. Generally, the agencies are the center of the regulatory regimes. As such, the agencies often have intense and frequent contacts with the other actors in



the regimes. Yet, these frequent contacts do not necessarily mean that stakeholders can participate and potentially influence the decisions of the agencies, as many contacts may be only one-directional or based on legal provisions, but not really inclusive in the sense of mutual exchange. Moreover, it was also mentioned that the agencies in some sectors have a lot of contacts with institutionalized actors, but less so with other stakeholders, such as regulatees, interest groups and consumer groups. Hence, across various sectors, it was recommended that agencies enhance and/or intensify their efforts to involve stakeholders in their processes, for example by installing an advisory council or reflection group. Key is that in such venues all relevant stakeholders should be involved so that the agency gains information from a diverse set of groups. Systematically involving stakeholders would not only enhance trust, but it would also enhance the regimes functioning in terms of confidence and compliance.

Second, it was stressed that regulation within many of the studied sectors is often highly complex and fragmented. The regulatory regimes deal with regulation from various levels of government, detailed and specific legal frameworks, multiple and sometimes contradicting interpretation of regulation and rapid technological developments. This makes that implementing regulation in the own organization can be a difficult task at hand. Especially smaller regulatees (e.g. SMEs in the food safety sector), new players on a market (e.g. FinTech companies in the financial sector), or organizations that usually do not deal with specific regulation (e.g. in the data protection sector) have a need for regulatory guidance. Regulatory guidance refers here to efforts from the agency or ministries and executive bodies to educate and advise regulatees on issues concerning the implementation of regulation in companies' business models. This means that the regulatory agencies would not only supervise and monitor regulatees, but also would have a shared responsibility in advising regulatees. However, it was mentioned in our interview data that regulatees sometimes are afraid to ask the agency about guidance on specific issues or to report deviations because of the risk of receiving fines. In this regard it may be suggested to divide the enforcement and the guidance within the agency. In some sectors, such guidance is provided by interest groups, but even those indicate to sometimes struggle with often fragmented regulation. In federal countries, the issue of fragmentation might also lead for additional need for guidance (for example in Germany and the Spanish food safety sector). In these sectors, the coordination between the national and regional levels regarding supervision and control is divided across government levels. In cases of diverging interpretations and strategies between governmental levels, more vertical as well as horizontal cooperation might be necessary. Yet, we also find that other policy sectors of those countries (e.g. the financial sector) have less issues concerning coordination. Logically, regulatory guidance would improve regulatees' compliance with regulation. Moreover, it was also mentioned that guidance from the regulatory agency could improve relations between regulatees and regulators, thus further enhancing regime confidence and regulatory consent.

Third, and related to previous point, is the call for differentiation within regulatory control. Within multiple sectors, specific actors call for differentiation in the way regulatory agencies approach different types of regulatees. The main distinction made here is between small and large companies. The logic here would be that the agency should look for ways to make the *administrative burden* easier to carry for smaller companies, without making the content of the regulation less strict. Not only do smaller companies have less resources and knowledge on how to implement regulation in their own business models, also the risk they pose is significantly smaller than bigger companies. We have seen that some regulatory agencies already prioritize their activities based on risk-assessments, meaning that agencies would prioritize their controls with companies that pose a higher risk for citizens. But this necessitates sufficient resources and capacity for regulatory agencies. Additionally, the qualitative data calls for differentiation between different subsectors with the purpose to not hamper new (technological) developments with strict and complex regulation. Although differentiation would improve regulatory consent, there are risks involved in terms of compliance and regime confidence. So such differentiation should be carefully considered in terms of its consequences before it is implemented.


Fourth, a recurring recommendation across sectors and countries is improving the communication of the regulatory agency towards (specific) stakeholders. In many sectors, consumer organizations have a rather negative outlook on the functioning of the regime. Also, we have seen that consumer organizations in some sectors are highly watchful towards all other actors in their regimes. The qualitative data highlight that clear communication could mitigate the watchfulness of consumer organizations. Here, the role of the agency would be to highlight and demonstrate that the regime is functioning well and that compliance levels are generally high, for example. Moreover, the agencies should also focus more on raising awareness among citizens about regulation and regulatory compliance. This is especially the case for sectors that have experienced crises that affected citizens directly, such as the banking crisis in 2011 or various food safety scandals. In the aftermath of these trust breaches, the agencies should make efforts to communicate how compliant the sector is. Such communication could take form in educational programs or media campaigns, as some agencies already (successfully) developed. Not only would this raise awareness lead to a better understanding of sector, but it would also enhance regime confidence and potentially reduce watchfulness or distrust towards specific regulatees.

In sum, through the various data collection efforts in the TiGRE project, we have gained a comprehensive understanding of how interactions between actors in regulatory regimes take place, how these interactions relate with trust and watchfulness, and how these in turn might enhance or deteriorate the functioning of the regulatory regime. Generally, the state of the regulatory landscape in the countries under study is functioning well. Yet, the TiGRE project also revealed potential pitfalls in regimes which might lead to increased watchfulness, decreased trust and deterioration of the functioning of the regulatory agencies, as well as their principals, can use the TiGRE reports to identify such pitfalls in their own regimes, and take inspiration out of the recommendations made in these reports.



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## Annex A. Trust and watchfulness patterns in different sectors by kind of trustor





Trust in National Regulatory Agency(ies)

Figure A1.1. Trust–watchfulness quadrants for the food safety sector for both public actors as trustees and private actors as trustees





Trust in National Regulatory Agency(ies)





Figure A1.2. Trust–watchfulness quadrants for the finance sector for both public actors as trustees and private actors as trustees





Scatter Plot of Trust and Watchfulness in National Regulatory Agency(ies) by Public Actors as Trustees (Data Protection)

Trust in National Regulatory Agency(ies)





Figure A1.3. Trust-watchfulness quadrants for the data protection sector for both public actors as trustees and private actors as trustees



## **Annex B: Correlation between regime effects**

Correlation Matrix				
		Regime confidence	Regulatory consent	Compliance
Regime trust (average)	Pearson's r	—		
	p-value	—		
Regulatory consent (average)	Pearson's r	-0.360	—	
	p-value	< .001	—	
Compliance (average)	Pearson's r	0.840	-0.399	—
	p-value	< .001	< .001	_

