האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Democratic Qualities of Regulatory Agencies and Public Trust

Thesis for the degree of "Doctor of Philosophy"

By Libby Maman

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This work was carried out under the supervision of

Prof. David Levi-Faur

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ABSTRACT

This dissertation focuses on the democratic qualities of regulatory agencies. Democratic qualities are procedures by which agencies share their regulatory power with external actors. These qualities reflect different views of democracy according to the nature of the actors that are being involved. The regulatory literature has so far focused mainly on accountability, a quality that reflects a *majoritarian* view of democracy and the expectation that administrative bodies maintain power with elected representatives (Scott 2000; Koop 2011). However, regulatory agencies also fulfil other qualities such as transparency, participation, and representation, in which regulatory power could be shared with a greater number of stakeholders or the public at large, reflecting a more *pluralistic* democratic perspective (Scott 2015; Durose, Justice and Skelcher 2015). While scholars have identified that regulatory agencies exercise these qualities and discussed them, they have not yet systematically measured them nor examined how they contribute to public trust in regulatory agencies and in regulated market firms.

This dissertation consists of three papers. The first paper, "*The Democratic Qualities of Regulatory Agencies*," (Maman, 2022) develops indicators that facilitates to quantitatively measure and compare how regulatory agencies in different countries and sectors have formal obligations for democratic qualities and how they fulfill them in practice. The second paper, "*Do Regulators' Democratic Qualities Increase Willingness to Trust Companies? An Experimental Study*" (Maman, still unpublished) examines the role of regulatory agencies' democratic qualities in cultivating public trust both in firms and in regulatory agencies, via a large experimental survey in the context of Fintech regulation. The third paper, "*Varieties of Regulatory Regimes and their Effect on Public Trust in Market Actors*," (Maman, Feldman & Levi-Faur, R&R) examines the role of regulation, in general, and the design of regulation, in particular, in promoting public trust in firms, via two experimental surveys. In particular, it explores the ability of self-regulatory designs and of regulatory intermediaries in ensuring public trust in Fintech technologies.

The dissertation begins with the challenge that public administration poses to democracy, in the sense that its broad and discretionary powers contradict democratic idea of rule of the people and instead reflect technocracy (Vibert 2007). It then describes how the case of independent regulatory agencies exacerbates this democratic challenge (Gilardi 2009). The

delegation of regulatory tasks to independent regulatory agencies has been a common practice in global governance since at least the 1980s (Levi-Faur 2005). However, the delegation itself and the rise of decentralized administration are controversial in terms of democratic legitimacy because they are detached from direct political control and instead work in the framework of accountability to parliament. As a remedy to this challenge, this dissertation offers the concept of democratic qualities, expanding from the narrower focus on accountability to a broader focus on *transparency, accountability, participation, and representation*. Building on an in-depth qualitative study, it develops 58 indicators of transparency, accountability, participation, and representation of regulatory agencies. These indicators enable other researchers to systematically measure and compare both formal and *de-facto* aspects of these qualities and to create a database to explore and develop a theory of democratic regulatory governance.

This dissertation also explores whether and how democratic qualities lead to higher public trust in regulatory agencies and in regulated firms. Building on a series of experimental surveys in the context of Fintech services, it finds that single democratic qualities are not sufficient to ensure trust in regulated firms nor in the regulatory agency itself. However, when a regulatory agency is described to have all four qualities, transparency, accountability, inclusiveness (representation) and participation, public trust in the regulator and in the company is increased. Interestingly, inclusiveness is sufficient to increase trust in the regulated company, despite not being sufficient in increasing trust in the regulatory agency itself. These findings imply that procedural democracy of regulatory agencies is beneficial not only for democratic legitimacy, but also for ensuring a prosperous economy.

Finally, this dissertation finds that public trust in market actors is dependent on the existence of a state regulatory agency and that neither self-regulation regimes, nor regulatory intermediaries, yield the same levels of public trust in regulated companies. This findings imply that the ability of the regulatory agency to loosen regulatory burden and rely on businesses' pledges of compliance without impairing public trust in businesses, is highly dependent on public trust in the regulatory agency. In other words, to benefit businesses by employing less strict regulatory designs while ensuring public trust in businesses and technologies, regulators must ensure that they are trustworthy in the eyes of the public.

This study has several important contributions. **First**, it drives academic attention to the democratic qualities of regulatory agencies as a multidimensional concept that can shed light on how these bodies share power at different levels and to different actors, thus contributing to different democratic perspectives. **Second**, it facilitates the empirical assessment of these qualities by developing indicators to measure mandatory and *de-facto* levels of accountability, transparency, participation, and representation. This can serve the scholarship to develop an empirically based theory on democratic regulatory governance and can be also adjusted to measure the democratic qualities of conventional administrative bodies (such as ministries). **Third**, by exploring the relation between the democratic qualities of regulatory agencies and trust, this dissertation sheds light on the positive impact that these qualities have on enabling and encouraging economic growth by increasing trust in new technologies. **Fourth**, by exploring the relationship between regulation and public trust, it increases our understanding of how regulatory agencies and trust in regulatory agencies, are important for market optimization through the decision to trust businesses and risky technologies.

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A statement on authorship and dissertation components

Dear Committee Members and Assessors,

I hereby declare that my doctoral dissertation entitled “The Democratic Qualities of Regulatory Agencies and Public Trust,” is written in the form of compilation of articles.

The first article, entitled “The Democratic Qualities of Regulatory Agencies,” was written solely by me, with the supervision of Prof. David Levi-Faur. In this paper, I have developed the theoretical framework and the research design, managed the collection and analysis of data, developed the indicators, and wrote the manuscript. This paper has been published in the peer-review journal *Policy & Politics*.

The second article, entitled “Do Regulators’ Democratic Qualities increase Willingness to Trust Companies? An Experimental Study”, was written solely by me, with the supervision of Prof. David Levi-Faur. In this paper, I have developed the theoretical framework and the research design, managed the collection of data, developed the indicators, and wrote the manuscript. This paper is currently being prepared for submission for a peer-reviewed journal.

The third article, entitled “Varieties of Regulatory Regimes and their Effect on Public Trust in Market Actors” has been written in collaboration with Yuval Feldman and David Levi-Faur who are listed as second and third authors. In this paper, I have led the research design, conducted all data analysis and written the manuscript. Yuval Feldman and David Levi-Faur provided additional comments on the design, theoretical models and manuscript versions. This paper is currently under review (R&R) in the peer-review *Journal of European Public Policy*.

The three articles are accompanied by an introductory chapter in which I lay down the motivation and aims of the dissertation, explain the relationship between the abovementioned three articles, position them in the broader context of the public administration and regulation literatures, and discuss their methodological approach. The dissertation also includes a concluding chapter in which I summarize the main findings and contributions of the dissertation.

Sincerely,
Libby Maman

ליבי ממן.

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INTRODUCTION

This dissertation focuses on the democratic qualities of regulatory agencies. Democratic qualities are procedures by which agencies share their regulatory power with external actors. These qualities reflect different views of democracy according to the nature of the actors that are being involved. These include transparency, accountability, participation, and representation (or inclusiveness). The regulatory literature has so far focused mainly on accountability, a quality that reflects a *majoritarian* view of democracy and the expectation that administrative bodies maintain power with elected representatives (Scott 2000; Koop 2011). However, regulatory agencies also fulfil other qualities such as transparency, participation, and representation, in which regulatory power could be shared with a greater number of stakeholders or the public at large, reflecting a more *pluralistic* democratic perspective (Scott 2015; Durose, Justice and Skelcher 2015).

While scholars have identified that regulatory agencies exercise these qualities and discussed them, they have not yet systematically measured them nor examined how they contribute to public trust in regulatory agencies and in regulated market firms. This dissertation aims to fill these gaps and develop a measurement tool to facilitate the collection of empirical data on how regulatory agencies in different countries and sectors have formal obligations for democratic qualities and how they fulfill them in practice. It also seeks to examine the impact of democratic qualities on public trust in agencies and in regulated firms.

This dissertation consists of three papers. The first paper, "*The Democratic Qualities of Regulatory Agencies*," (Maman, 2022) develops indicators that facilitates to quantitatively measure and compare how regulatory agencies in different countries and sectors have formal obligations for democratic qualities and how they fulfill them in practice. The second paper, "*Do Regulators' Democratic Qualities Increase Willingness to Trust Companies? An Experimental Study*" (Maman, still unpublished) examines the role of regulatory agencies' democratic qualities in cultivating public trust both in firms and in regulatory agencies, via a large experimental survey in the context of Fintech regulation. The third paper, "*Varieties of Regulatory Regimes and their Effect on Public Trust in Market Actors*," (Maman, Feldman & Levi-Faur, R&R) examines the role of regulation, in general, and the design of regulation, in promoting public trust in firms via two experimental surveys in the context of Fintech regulation. In particular, it explores the ability of self-regulatory designs and of regulatory intermediaries in ensuring public trust in Fintech technologies.

This introductory chapter begins with the challenge that public administration poses to democracy, in the sense that its broad and discretionary powers contradict democratic idea of rule of the people and instead reflect technocracy (Vibert 2007). It then describes how the case of independent regulatory agencies exacerbates this democratic challenge. I then introduce the idea of democratic qualities as a remedy to the clash between administration and democracy and explain how studying them can enable to learn about the ways in which regulatory agencies contribute to majoritarian democratic vs. pluralistic view of democracy. Finally, I discuss the potential positive effects of democratic qualities on public trust in public organizations, regulatory agencies, and regulated firms. This introduction concludes with a summary of the three papers, detailing the methodological and empirical choices as well as the main findings and contributions.

Research Problem: The clash between public administration and democracy

> *"Democracies cannot survive without a strong, technically competent, effective, efficient, and responsive public service, but the existence of such a public service contradicts the democratic notion of government by the people"* (Hamilton, 2007:3)

Democracy is a controversial concept. A recent research note counted no less than 2234 different adjectives in the literature to describe democracy (Gagnon, 2018). However, while there are myriad notions of how a democratic country should function, there is a consensus on the basic, almost literal definition: **democracy is rule by the people**. Unlike monarchies or autocracies, in democracies the people are the sovereign of power (Collier & Levitsky 1997; Held 2006). Moreover, despite intellectual debates about the forms of democratic governance, most democratic states today take the form of representative democracy. In representative democracies, people delegate their power through elections to their representatives, to govern on their behalf. Then, the representatives use this power to make laws and control the administration.

Public administration (or the bureaucracy) is the system that makes democratic governance possible by executing the will of politicians and enabling the public to get what it wants (Suleiman 2003). The starting point for the study of public administration was the perception that administration is a scientific process governed by hierarchy and rules, and that civil servants should be obedient to their elected managers and apolitical in their work. The basic premise, which was heavily influenced by Weber's writings, was that although public administration is a crucial element of the state, its role should be limited to merely implementing the decisions of politicians (Weber 1920).

Yet this ideal type of civil servant who merely implements the will of politicians has later seemed naïve, and perhaps unrealistic, portrayal of bureaucrats and the power that the administration wields. Starting with intellectuals such as Herbert Simon and Dwight Waldo, the administration was increasingly understood in the 1940s and 1950s as a *political* sphere, in which civil servants are not merely implementers but have their own power and discretion (Rosenbloom & McCurdy 2006). This view soon came to dominate the way public administration was studied and perceived, and it was soon perceived as a challenge to democracy.

Rational choice theorists claimed that bureaucrats will inevitably exploit the discretion granted to them due to their self-interest nature (Downs 1967; Niskanen 1971). These scholars argued that given this nature it is important to reduce the discretion granted to the administration and to maintain political control. Later, as the state expanded, and policy issues became more complex, new information asymmetries emerged between the administrative and political tier (McCubbins, Noll, & Weingast 1987). This made the solutions offered by rational choice (and principal agent) theorists inadequate. The asymmetry of information made the elected tier dependent on the administration, not only for the implementation of its laws, but also for the design of policies and regulations. It was understood that civil servants have immense power and discretion to identify problems, set agendas and design policies. This expansion of discretion was seen as highly undemocratic in the sense that it goes beyond the notion of democratic legitimacy, since public power is in not in the hand of the people, nor their elected representatives (Peters 2010).

This clash between the bureaucracy and the democracy further intensified with the rise of the regulatory state. Since the 1980s, a process of delegation and re-regulation has come forward in Western countries and later in other parts of the world, where governments have shifted considerably (Levi-Faur 2005). A central feature of the regulatory state was the re-arrangement of the structure of government and the proliferation of independent regulatory agencies (Lægreid & Verhoest 2010; Jordana et al. 2018). This phenomenon of independent public bodies making and enforcing rules further exacerbates the clash between democracy and public administration because these bodies have rulemaking power which is not in the hands of elected politicians. Accordingly, many claim that independent regulatory agencies indeed suffer from a democratic deficit (Majone 1999; Vibert 2007).

The Democratic Qualities

The question, then, is how can a competent, expert, and efficient public administration remain democratic? Or in the words of Frederick C. Mosher:

> *"How can a public service so constituted be made to operate in a manner compatible with democracy? How can we be assured that a highly differentiated body of public employees will act in the interests of all the people, will be an instrument of all the people?"* (Mosher, 1982:5)

The scholarship offered solutions of various kinds. Principal-agent theorists focus on structural-external solutions, such as containing and downsizing the bureaucracy to reduce its power or designing agencies with less independence by politicizing the managerial tier of the administration (Wood & Waterman, 1991). This scholarship has also suggested developing various oversight mechanisms to ensure that the elected level controls administrative power (McCubbins, Noll, & Weingast, 1987). However, the implication of this approach is that too much oversight of the bureaucracy leads to a reduction in its effectiveness, efficiency, and performance (Balla & Gormley 2017; Gallo & Lewis 2012). Moreover, it does not address agencies that have already been established with a high degree of independence, such as independent regulatory agencies, so it is still remined unclear how these agencies can be designed to meet democratic norms.

Others focus on procedural solutions (Scharpf 1999; Schmidt & Wood 2019). These include procedural features of the administration that are claimed to improve its democratic quality, such as greater public **participation** in decision-making (Denhardt & Denhardt 2007; Nabatchi 2012), **transparency** (Hood & Heald 2006; Fung, Graham & Weil 2007), and **accountability** (Lupia & McCubbins 1994; Balla & Gormley 2013). Another solution is suggested by representative bureaucracy, which claims that **representation** in the administration (civil servants from different social groups) improves responsiveness to public interests and thus the democratic legitimacy of the administration (Wilkins & Keiser 2004).

This dissertation offers to conceptualize these four practices as the **democratic qualities,** *organizational practices and mechanisms that confer power to external actors.* External, as in any actor which is out of the administration, be it the public, interest groups, or political actors.

However, what is noteworthy about these qualities, is that they derive from different notions of democracy, and some of them deviate from the mainstream representative democracy and build on more pluralistic theories of democracy (Durose, Justice, and Skelcher 2015).

Table 1 - Democratic theories and democratic qualities

Democratic perspective	**Majoritarian**	**Pluralistic**
Democratic theory	Representative	Participatory, Direct, Deliberative
Power diffusion	Concentrated: Power should remain within the elected, even after delegation.	Semi-diffused: Power should be diffused with external actors.
Role of the administration	A tool to execute policy, and to ensure effective governance under political control.	To be a separate channel for citizen participation and scrutiny.
Democratic qualities	**Political Control** (If possible)	**Participation**
	Political accountability	**Representation**
		Transparency

Source: Maman, 2022.

A majoritarian perspective on democracy views public administration bodies as democratic to the extent that they are controlled by democratically elected politicians or, if this is not possible because of structural independence, to the extent that they are accountable to them. A pluralist perspective, on the other hand, has different expectations of public administration. This perspective holds that for public organizations to be democratic, they should allow a broader range of actors, especially the public, to scrutinize, participate, and influence government activities (Papadopoulos and Warin 2007). In particular, this approach requires transparency, participation, and representation, qualities that reflect the administration's sharing of power with a broader set of actors: either stakeholders, interest groups, or the wide public.

Some scholars have attempted to explore the extent of which these qualities do indeed reflect democratic idea. In particular, Sørensen and Torfing (2005) developed the democratic anchorages framework, for the study of governance networks at the domestic level. More relevant to this dissertation, Ewert, Kaufmann and Maggetti (2020) applied this framework in the particular context of transnational multi-stakeholder internet regulatory authorities, including private organizations and networks, which they acknowledge that do not stand up to representative democratic norms. The democratic anchorage framework also acknowledges that there are several mechanisms that enhance democraticness, that can only be identified if we move beyond representative democracy. This framework asserts that democraticness is linked to the extent that an entity is "properly linked to different political constituencies and to a relevant set of democratic norms that are part of the democratic ethos of society" (Sørensen and Torfing 2005:201). These works make an important step towards the realization of the various ways regulatory bodies can enhance democratic qualities.

While some work has been done to assess the presence of these four qualities in the administration, a comprehensive measure has not yet been developed. State-level indices of democracy have acknowledged the plurality in the concept of democracy and developed multidimensional measures that examine how states reflect different versions of democracy (Lindberg et al. 2014). Yet, these measures include either very few or no indicators of democratic quality in the administration (cf. Altman & Pèrez-Liñan 2002; Beetham 2004; Bühlmann et al. 2008). If the meso-level (organizations) is not measured and democracy is measured only at the macro-level, then differences between the various administrative authorities are ignored. This is a gap that should worry anyone who recognizes the central role of administration and its far-reaching powers.

The **first gap** identified in the literature, then, is the **lack of a comprehensive measurement tool for understanding and evaluating the democratic qualities of administrative bodies**.

Democratic qualities and trust

"Trust is central to legitimate democratic government, to the formation of public policy, and to its implementation" (Ruscio 1996: 462).

The previous section calls for developing a research agenda focused on the democratic qualities of public organizations and for identifying the extent to which the undemocratic nature of public administration is mitigated by measuring the extent to which public organizations are transparent, accountable, representative, and enable participation. Moreover, this dissertation asserts that is important to place democratic qualities at the center of scholarly research, not just out of intellectual curiosity or to know how they contribute more to some democratic perspectives than others but because democratic qualities can potentially improve attitudes toward the administration and increase public trust.

Public trust in the government is accepted to be a virtue, a social capital which is necessary both as an end in itself (Putnam 1993), and as a means to other goals such as increasing compliance and the likelihood of voting (Grönlund & Setälä 2007; Levi, Sacks, & Tyler 2009).

Research shows that low levels of public trust in governments can negatively affect the ability of governments to effectively carry out their policies (Braithwaite & Levi 1998). In addition, the erosion of political trust can lead to movements and protests the government and can threaten stability (Mishler & Rose 2005).

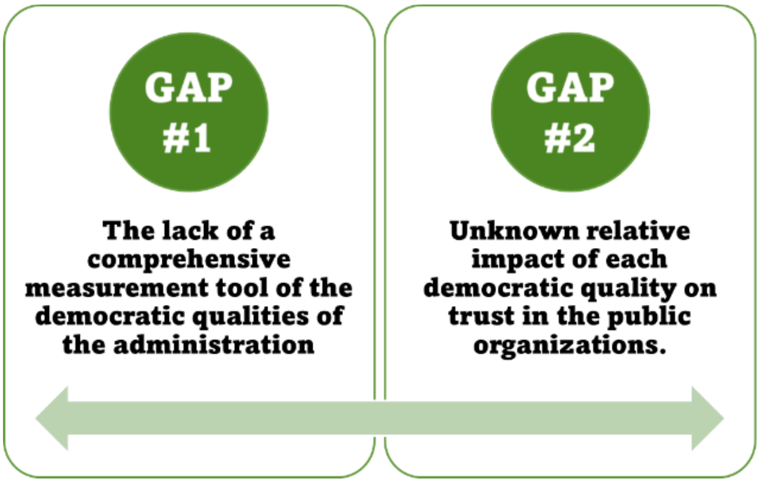
Variations in the level of trust toward public organization are traditionally explained with two different perspectives: cultural or institutional explanations. The culturalist perspective underlines the role of long-term developments leading to shared norms such as civic values, post-materialism, and interpersonal trust (Levi-Faur 2020). On the other hand, institutionalist perspective sees trust in public organizations not as a trait of societies, but rather as a variable that derives from: (a) the performance of the institutions themselves and (b) the quality of government (Svallfors 2013; Khan 2016; Yousaf, Ihsan and Ellahi 2016).

Among the qualities of government, few empirical studies found that transparency, participation and representation can increase trust and satisfaction in governmental organizations. Based on cross-country data, Schmidthuber, Ingrams and Hilgers (2020) found that both transparency and participation positively influence citizen trust in government. Another study, focusing on e-governance, a form of public participation, also found evidence that participation increases satisfaction with government (Kim and Lee 2012). Ingrams, Kaufman, and Jacobs (2020) find positive effects of both transparency and participation on several outcomes (satisfaction, trustworthiness, and perception of fairness). Choi (2018) found that levels of citizens' trust in bureaucracies is higher when an impartial and gender representative public administration exists.

The effect of accountability on trust has not been explored yet. Moreover, the *relative* effect of each democratic quality on trust has also not been explored yet. In other words, we do not know which of the four qualities matter more for public trust. Hence, the **second research gap in the literature is the unknown relative impact of each democratic quality on trust in public organizations.**

To summarize, two main research gaps can be identified in the literature:

Figure 1 – Research gaps in the literature



To contribute to the literature and filling these gaps, this dissertation focuses on a specific kind of public organization – the independent regulatory agency.

The case of regulatory agencies

Regulatory agencies are institutions that exert a form of strong political power through the application of regulatory power. These bodies make rules (regulations), monitor market activity, and enforce rules with regarding to various market sectors (Gilardi 2009; Levi-Faur 2005). Since the 1980s, independent regulatory agencies have proliferated and become a best practice of governance in the United States, Europe, and other parts of the world (Jordana et al. 2018; Verhoest 2018). Independent regulatory agencies have been seen by many as a promising form of governance in capitalist economies, especially as their independence ensures protection against political bias and improves performance and efficiency (Levi-Faur 2011). The establishment of these bodies as independent has also been explained by theory of credible commitment and of blame avoidance (Hogwood 1995).

However, the delegation of significant political power to non-majoritarian institutions has also been criticized as undemocratic (Majone 1999). This criticism is based on the argument that the independence of these bodies challenges the democratic idea, particularly the representative notion of democracy, which requires that power remain in the hands of the elected (Vibert 2007). The regulatory agency was chosen as the focus of this dissertation because the phenomenon of independent public bodies making and enforcing rules represents the most extreme case of the conflict between democracy and public administration.

The regulation literature has discussed the legitimacy of regulatory bodies extensively (Van Veen 2014), and at least in the regulation scholarship, it became a consensus that accountability alone can remedy the undemocratic nature of these agencies (Scott 2015). Accountability has been defined as occurring when an actor, in a position of responsibility in relation to the interests of another actor, is required to give an account of the conduct of his duties, while the second actor can either reward or sanction the former (Scott 2000; Maggetti 2010). Another prominent definition is that of Bovens (2007), by which accountability is defined as a relationship between an actor and a forum, in which the actor is obliged to explain and justify his or her conduct, the forum can pose questions and pass judgment, and the actor may face consequences. Accordingly, various measures have been developed to assess the extent of accountability in regulatory agencies (e.g., Edwards and Waverman 2006; Hanretty and Koop 2012; Jordana et al. 2018).

However, focusing only on accountability to assess the democratic quality of regulatory agencies is largely insufficient. As I argued above, it is only one of various practices in which regulatory agencies (and public organizations in general) share power with external actors. Moreover, in this quality, power is shared with the political tier or state actors, which is a limited view of democracy. The focus of the scholarship on this quality only is therefore inadequate. It leaves us with the knowledge of how these bodies reflect democratic legitimacy only in the majoritarian perspective, but it ignores other perspectives which attribute democratic qualities to transparency, participation and representation (Papadopoulos and Warin 2007; Durose, Justice, and Skelcher 2015). Accountability scholars have recognized the limitations of this concept and hence stretched it to include 'downward accountability', practices such as transparency and participation (Scott 2015). These qualities have been described as democratizing power by opening new channels of access and enabling the participation of marginalized actors (Thatcher and Stone Sweet 2002; Koop and Lodge 2020). This dissertation offers to disentangle these qualities from the overreaching accountability framework, and instead explore them separately under the framework of democratic qualities.

I identified that representation, transparency, and participation have hardly been measured systematically in the context of regulatory agencies. Efforts to develop measures focus on accountability, sometimes as an umbrella concept that includes these other qualities which impeds the ability to compare the four democratic qualities and to realize whether agencies perform trade-offs between qualities or maintain equal levels of these qualities. To identify how democratic regulatory agencies are, grasping the full diversity of actions it can take to advance democratic norms, there is a need to develop a systematic measure of the four democratic qualities altogether. Measuring the democratic qualities of regulatory agencies can open many possible research directions, including explaining why regulatory agencies develop some qualities more than others, examining the relation between agency independence levels and democratic qualities, and exploring possible effects of democratic qualities.

One of the possible effects of democratic qualities is increasing public trust. Trust in public organizations has been seen as deriving from performative qualities of the organization (Seyd 2015) or moral qualities, such as democratic qualities (Metlay 1999; Svallfors 2013; Khan 2016; Yousaf, Ihsan and Ellahi 2016). In the context of regulatory agencies, however, this has almost not been explored.[1] This is a lacuna since in the case of regulatory agencies, public trust has special importance. Not only can public trust in regulatory agencies legitimize their existence as independent organizations, but it can also lead to greater trust in regulated businesses.

This dissertation addressed these research gaps in the three papers.

Summaries of papers

This dissertation consists of three separate papers. The first paper develops the conceptual framework of the democratic qualities and develops indicators to measure them in the context of regulatory agencies, both the legal obligation and the de-facto aspect of these qualities. The second paper explores the role of democratic qualities on public trust in regulators and on public trust in firms. The third paper explores the role of regulation and the regulatory design on public trust in firms. This section describes each paper, explains the methodological and empirical choices and summarizes the main findings and contributions of each paper.

Paper 1# The Democratic Qualities of the Regulatory Agencies

The first paper, "The Democratic Qualities of the Regulatory Agencies", which has been published in the peer-review journal *Policy & Politics* (Maman 2022), aims to develop a comprehensive quantitative measure of four democratic qualities in regulatory agencies. Its main research question is **how can we measure these democratic qualities and ultimately**

[1] The effect of transparency on trust has been explored and yielded mixed results (cf. Grimmelikhuijsen et al. 2013; Grimmelikhuijsen et al. 2021). But other qualities' effect on trust has not been explored yet.

realize on an empirical basis, the extent to which regulatory agencies reflect different notions of democracy?

To answer this question, the paper first sets out the concept of democratic qualities of regulatory agencies, building on the framework developed in this introductory chapter on the democratic qualities of public administration. It then reviews previous measurements of transparency, accountability, participation, and representation in regulatory agencies and identifies conceptual overlaps on which these measurements are built. In order to develop a comprehensive measurement of the four qualities simultaneously, the paper offers four separate definitions of the qualities.

> **Transparency:** *The disclosure of information about the regulator, the regulatory decision-making process, and outcomes to non-state actors.*
>
> **Accountability:** *The disclosure of information (and specifically reporting, answering, and justifying) to state actors.*
>
> **Representation:** *The extent to which the agency includes state and non-state actors in its decision-making bodies.*
>
> **Participation:** *Consultation and deliberative procedures that enable non-state actors to participate in the regulatory decision-making process.*

Another challenge with the existing measures mentioned in the first paper is that they were developed without justification and not on an empirical basis. Moreover, it is not clear whether the previous measures are appropriate for measuring formal or *de-facto* democratic qualities. Therefore, to develop empirically informed indicators for both formal and *de-facto* democratic qualities, the paper builds on an in-depth qualitative study of six diverse regulatory agencies in different countries and sectors. The study included analysis of various written sources, including agency websites, legislation (primary and secondary), reports, and publications. In addition, 33 semi-structured interviews took place with senior staff from various departments within the studied agencies, as well as external agency stakeholders, including political, business, and civic groups.

Using qualitative methods in the process of developing a quantitative instrument allows for the development of a better-contextualized measurement tool and ensures that the measures include all relevant and important indicators (Creswell and Creswell, 2017).

The agencies analyzed included the Mexican competition agency (COFECE), the UK food safety agency (Food Standards Agency), the UK care quality commission (CQO), the Israeli

Competition Authority, the Israeli Public Utility Authority for Electricity, and the Israeli Gas Authority. They were chosen in the logic of a 'diverse' case selection, to ensure that the proposed indicators could be later applied to measure agencies in different sectors and countries, and therefore to allow for country and sector comparisons (Gerring 2017).

In total, 58 indicators were developed both for legal and *de-facto* dimensions: 22 to measure transparency, 12 to measure accountability, 12 to measure participation, and 12 to measure representation. In the paper's supporting material which are included in this dissertation, the indicators are applied to two regulatory agencies to illustrate the usability of the indicators.

The paper moves the literature forward beyond the discussion on *whether* the independence of regulatory agencies undermines democracy and instead, through a development of measurable indicators, it enables to understand *how* these bodies exhibit democratic values through democratic qualities. Prior to this paper, there was a methodological gap and the compatibility of regulatory agencies with democracy has not been fully explored in the literature. While scholars have focused mainly on accountability and developed quantitative measures that led to the construction of broad databases, other democratic qualities have not received similar attention. This made it impossible to assess the role regulatory agencies play in advancing democratic norms, and whether they move toward more pluralistic, open modes of governance.

Still, additional data is necessary to complete the index construction, validate the suggested indicators and develop a more sophisticated weighting system and aggregation method. To this end, it should be mentioned that the TiGRE project (Horizon2020: grant agreement number 870722), which studies the role of trust in regulation, helps to move forward to this aim. TiGRE has adopted this dissertation's conceptual framework and indicators of the democratic qualities of regulatory agencies, and using them, it has collected data on the formal and de-facto democratic qualities of 47 regulatory bodies from nine European countries over three different regulatory sectors: data protection, food safety and the financial sector (Maman et al. 2021). I am involved in these efforts, and I am currently leading a paper that will report on this dataset, together with other TiGRE researchers from IBEI and other institutions.

Paper 2# Do Regulators' Democratic Qualities increase Willingness to Trust Companies? An Experimental Study

The second paper, "Do Regulators' Democratic Qualities increase Willingness to Trust Companies? An Experimental Study," assesses the role of democratic qualities of regulators in promoting public trust in both regulators and market entities. The paper draws on an experimental survey conducted on a large representative sample of the Israeli population (N=1984). This paper focuses on Fintech regulation in the context of data privacy. The Fintech case was chosen for several reasons. First, I opted for a market sector that is relatively new, so respondents do not have prior preferences and attitudes toward it, hence reducing other covariates to the minimum. Open banking and Fintech apps were a new field in Israel at the time of the study, and regulation on the data protection in this field was still evolving. This meant that respondents were expected to have relatively little knowledge or prior opinions on this topic, thus we could expect more control for the treatment. In addition, the case of data protection in Fintech products is particularly important and relevant when studying public trust, due to the increasing number of data scandals and privacy-threatening cases around the world. Building on Luhmann's conceptualization, trust is only relevant when there is a risk involved (Luhmann 2000).

Therefore, respondents were presented with a baseline story about a hypothetical Fintech app, and a description of a state regulator and its role. The survey then randomly assigned respondents to 6 groups. While the control group only read the baseline description, the other 5 groups read an additional description about the regulator's democratic quality. Descriptions included transparency, accountability, participation and inclusiveness and one group read about a regulator with all four qualities. The survey then measured trust both in the regulator and in the Fintech company (order randomized). The data was analyzed to explore hypotheses on the positive effect of the four democratic qualities on trust in the regulatory agency and Fintech company. In addition, it was expected that trust in the regulator mediates the effect of democratic qualities of the regulator on trust in the Fintech app.

The findings show that, contrary to expectations, individual democratic qualities of the regulatory agency do not increase trust in regulatory agencies. Neither transparency, participation nor accountability or inclusiveness increased trust in the regulator. Only when the regulatory agency was described to have all four qualities, trust in the regulatory agency was increased significantly. However, when it comes to trust in the firm, inclusiveness does have a significant positive effect, and so does having all qualities.

The effect of all democratic qualities on trust in the firm was found to be mediated by trust in the regulatory agency. This confirm that citizens rely on regulatory agencies' democratic qualities in their operational decision to trust and use new technologies and corroborates the findings from the second study, on the importance of the regulator in cultivating trust in market actors. However, inclusiveness of the regulator affects trust in the firm directly, not through increasing trust in the regulator. This direct effect could be explained by the ‘Optimistic Trust Effect’, where inclusiveness could have led respondents to have positive beliefs about a just world, which masks the potential risks in the app and makes them feel more optimistic and confident leading them to more trust in the app (Wilson & Darke 2012). Future studies can shed light on this puzzle by introducing both existence and lack of democratic qualities to control for this effect.

This paper sheds light on the comparative effect of democratic qualities of regulators on trust in market actors and willingness to adopt new technologies. The paper contributes to the literature by confirming that (at least in the context of data-protection and Fintech) democratic qualities of regulatory agencies, when they come together, are not only important normatively, but they also have a positive impact on increasing regulated firms – hence have an economic value. Moreover, while some scholars question whether becoming more responsive to various stakeholder increases legitimacy or undermines the legitimacy of regulatory agencies, which was for many years based on their independence and expertise (Koop & Lodge 2020), this study shows that becoming more democratic, and sharing more power to the public, especially if various qualities are included and not just one, has a strong positive impact on trust in regulatory agencies.

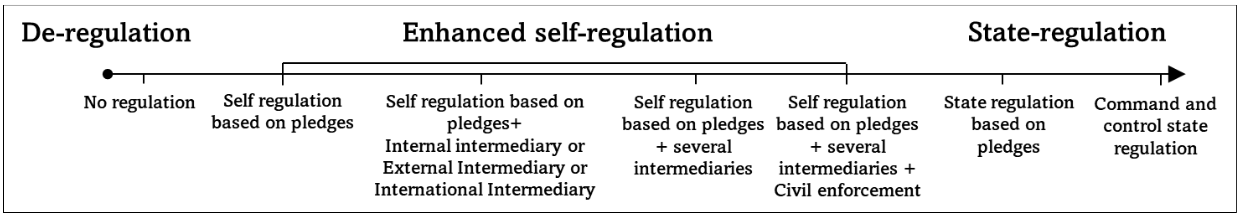
Paper 3# Varieties of Regulatory Regimes and their Effect on Public Trust in Market Actors

The third paper, "Varieties of Regulatory Regimes and their Effect on Public Trust in Market Actors", asks: **Does regulation increase trust in firms, and does the design of regulation matter?** In particular, it explores the ability of self-regulatory designs and of regulatory intermediaries in ensuring public trust in firms.

To answer these questions, we conducted two experimental surveys on representative samples of the Israeli population (Study 1: N=597; Study 2: N=598). Respondents were introduced to a hypothetical (but realistic) and new Fintech company that offers improved credit services but requires access to personal financial data. The studies then measured the extent to which informing respondents about the existence and type of regulation increased their trust in the Fintech company and willingness to use its services. To explore different forms of regulation, the paper developed the *continuum of regulatory regimes* (Figure 2), which describes incremental designs of regulation building on the concept of 'enhanced self-regulation'

(Medzini 2021). It goes from no-regulation in one end, to strict command-and-control state regulation in the other end. In between, self-regulatory designs are described, including less or more tools and intermediaries.

Figure 2: The Continuum of Regulatory Regimes



The hypotheses suggest a hierarchy in trust-enhancing designs, with state regulation providing more trust than self-regulation, command-and-control more than a hybrid design (where the state regulator reduces oversight and relies on firms' pledges), and multilayered self-regulation more than thin self-regulation (that only utilizes pledges). In other words, the higher in the continuum of regulatory regime, the more public trust.

An experimental survey was chosen as the methodology due to its ability to control for treatments and to unveil the relative effect of the independent variables – regulation and regulatory design. The reason to focus on the Fintech sector was that the importance of regulation for trust in this sector was established in the second paper, and we was interested in deepening and building on this result to explore the relative importance of regulatory designs for public trust.

The findings of the two studies corroborated most of our hypotheses. They show that trust in the Fintech company was highly dependent on the existence of state regulation, where traditional command-and-control led to a higher degree of trust in market entities compared to state regulation based on pledges. It was also found that all varieties of self-regulation led to lower levels of public trust compared to state regulation. In addition, the paper found a significant interaction effect of trust in the regulator for state regulation that relies on pledges.

These findings imply that the public relies on the existence of a state regulator to trust market firms, such as the Fintech company described in the study. In addition, the study implies that while trust is lower when the regulatory design includes self-regulatory tools, when the public trusts the regulator, regulators can use self-regulatory tools and still maintain a high level of public trust in market actors.

The results of this study open the way for a different theoretical perspective on the growth of regulation and the relationships between regulation and markets. From this perspective, there is an overlapping interest of businesses and the public in the need for state regulation, which can explain the continued growth, some would say explosion, of state-based regulation in neoliberal countries. In addition, if states wish to accommodate businesses wishes and relax regulatory burdens, by moving towards newer and less punitive regulatory approaches, states first need to gain trust of the public.

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Paper #1

The Democratic Qualities of Regulatory Agencies

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research

The democratic qualities of regulatory agencies

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For decades, independent regulatory agencies were considered undemocratic because of their independence from political control. However, regulatory agencies are increasingly developing practices and organisational designs that reflect the sharing of power with external actors, thereby enhancing their democratic qualities. While scholars have studied these qualities, namely transparency, participation, representation and accountability, a comprehensive measure by which these qualities can be measured and compared has not yet been developed. This article fills that gap by developing indicators to measure mandatory and voluntary democratic qualities following a qualitative analysis of six regulatory agencies. It contributes to the study of regulation and public administration more broadly by advancing a research agenda that illuminates the role of bureaucracies in promoting pluralistic or majoritarian democratic values.

Key words democratic qualities • regulatory agencies • measurement development • public administration and democracy • transparency • accountability • participation • representation

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Public administration organisations have an immense impact on our lives. More than 90 percent of American law is created through administrative rules, and similar estimates exist with respect to other countries (Potter, 2019). However, the extensive discretionary power which unelected bureaucrats have, challenges the democratic idea, and especially the representative notion of democracy which calls for maintaining power in the hands of the elected (Vibert, 2007; Bertelli and Busuioc, 2021). This tension between bureaucracy and representative democracy has been recognised by scholars of principal–agent theory, who see it as a delegation problem and suggest designing agencies with mechanisms of political control (Wood and Waterman, 1991; Gallo and Lewis, 2012). Yet, in the case of independent public agencies, such as regulatory agencies, this solution is structurally impossible as these bodies are ex-ante delegated with political independence (Gilardi, 2009). The global proliferation of these agencies has led to what is considered as the rise of 'the regulatory state', that shifted modern states to encompass even more autonomous and unelected power than ever (Levi-Faur, 2011; Verhoest, 2018). Many have criticised the independence of these bodies and claimed that they are democratically deficient (Majone, 1999; Lodge, 2004; DeCanio, 2015).

Others disagree and assert that the fact that these bodies were given mandate by elected actors grants their independence democratic legitimacy (Van Veen, 2014).

This article wishes to move the literature forward beyond the discussion on whether the independence of these bodies undermines democracy and instead ask, how independent bodies can exhibit democratic values through *democratic qualities*, organisational practices and mechanisms that confer power to external actors. Moreover, it asks how we can measure these democratic qualities and ultimately realise on an empirical basis, the extent to which regulatory agencies reflect different notions of democracy. To answer this, it reviews previous measures and performs a qualitative study of six regulatory agencies to develop a better informed and a more exhaustive list of indicators which can be used to systematically assess mandatory and voluntary democratic practices.

So far, regulation scholars have focused mostly on accountability (for example, Scott, 2000; Maggetti, 2010; Koop, 2011; Brandsma and Schillemans, 2013). Accordingly, various measures have been developed to assess the extent of accountability in regulatory agencies (for example, Edwards and Waverman, 2006; Hanretty and Koop, 2012; Jordana et al, 2018). However, focusing only on accountability to assess the democratic quality of regulatory agencies is largely insufficient (Scott, 2015). The most basic and common definition of accountability, which holds that it occurs when agencies report to political actors and justify their actions, refers only to the representative notion of democracy, ignoring pluralistic theories of democracy that call for sharing power with citizens and stakeholders. Nonetheless, regulation scholars have identified qualities that reflect non-representative democratic expectations of the administration, including transparency, participation and representation. Through these qualities, regulators democratise their power and give external actors access to regulatory decision-making processes (Durose et al, 2015). Yet, despite the growing number of studies that focus on these qualities, up to now no systematic tool has been developed to measure and compare them in the context of regulatory agencies.

This gap makes it impossible to collect data and compare the extent to which regulatory agencies develop representative versus pluralistic democratic qualities. This article contributes to filling this gap by developing indicators of mandatory and de-facto levels of accountability, transparency, participation and representation, which are identified as the central democratic qualities of regulatory agencies. Such indicators can enable the systematic collection of data on various democratic qualities altogether, to enable a comparison of them to be made within and between agencies. Such indicators can also enable us to assess the degree to which regulatory governance is shifting to a more pluralistic form, opening up more and becoming more responsive (Koop and Lodge, 2020). While other studies have attempted to make the same connection, they either confine the examination in light of representative democracy only (such as the analysis in the book by Anthony Bertelli (2021)), or do not aim at developing a comprehensive quantitative operationalisation (such as Papadopoulos and Warrin (2007)).

This article is organised in four sections. The first section discusses the democratic challenge of regulatory agencies, the existing literature on transparency, accountability, participation and representation, and develops conceptually distinct definitions for these four qualities. The second section describes the methodological process of developing the indicators. The third section presents the developed indicators along with discussion on the qualitative study and how it informed the new indicators. Finally, the fourth section summarises how the proposed indicators can contribute to the field of regulation and public administration.

Theoretical framework

The democratic challenge of regulatory agencies

Since the 1980s, independent regulatory agencies have proliferated and become a best practice of governance in the United States, Europe and other parts of the world (Jordana et al, 2018; Verhoest, 2018). Independent regulatory agencies have been seen by many as a promising form of governance in capitalist economies, especially as their independence ensures protection against political bias and improves performance and efficiency (Levi-Faur, 2011). However, the question of the democratic legitimacy of regulatory agencies and their 'democratic deficit' has remained open (Gilardi, 2009).

On the one hand, many scholars suggest that independent and expert-based agencies are deficient from a democratic perspective (Balla and Gormley, 2017). This sense of danger to democracy stems from a representative democracy view that opposes the idea that non-majoritarian institutions could have such a significant impact on policy (Majone, 1999; Vibert, 2007). Accordingly, the independent regulatory agency is perceived as embodying the undemocratic nature of the autonomous state and an expression of technocratic rule (DeCanio, 2015). On the other hand, some scholars claim that regulatory agencies do not suffer from a democratic deficit since their independence was mandated by majoritarian institutions (Van Veen, 2014).

This article aims to move beyond the question of the democratic legitimacy of delegation and focus instead on the practices and mechanisms that enhance the democratic quality of regulatory agencies. To identify how democratic regulatory agencies are and to compare them, it is proposed to develop a systematic measure of their democratic qualities. Democratic qualities are understood as *organisational practices and mechanisms that enable the inclusion and confer power to external actors in the regulatory rulemaking and decision-making process.* This definition focuses on procedures and organisational aspects that govern the work of regulatory agencies and therefore captures *throughput* democratic qualities (Schmidt and Wood, 2019). Measuring democratic qualities is necessary to assess the extent to which regulatory agencies contribute to democratic values.

The democratic qualities of regulatory agencies

Measure development should begin with the formulation of a systematised concept, that is, an operational definition of the concept to be measured (Adcock and Collier, 2001). However, agreeing on what constitutes the democratic qualities of regulatory agencies is not an easy task, as the very concept of democracy is contested. To address this challenge, this article adopts an inclusive approach that takes into account various views on what constitutes democratic governance and what is expected from the administration. Specifically, both the representative theory of democracy and the participatory theory of democracy are considered, following Durose et al (2015), who developed a normative framework for democracy that raises expectations from arm's length governance bodies and offered the adoption of a polycentric perspective in addition to a traditional majoritarian approach. Table 1 summarises the expected democratic qualities of administrative bodies according to the different democratic perspectives.

Table 1: Democratic perspective and democratic qualities

Democratic perspective	**Majoritarian**	**Polycentric**
Democratic theory	Representative	Participatory, direct, deliberative
Power diffusion	Concentrated: power should remain within the elected, even after delegation.	Semi-diffused: Power should be diffused with external actors (Interest Groups or the public).
Role of the administration	A tool to execute policy: its main aim is to ensure effective governance under political control.	To be a separate channel for citizen participation and scrutiny.
Democratic qualities	**Political control**	**Participation**
	Political accountability	**Representation**
		Transparency

Representative democracy, or a majoritarian perspective, views public administration bodies as democratic by virtue of delegation and control (Bertelli, 2021). These bodies are seen as democratic in the extent to which they are controlled by democratically elected politicians, or accountable to them (Hupe and Edwards, 2012). Principal–agent theory has been concerned with the difficulty of controlling the administration and suggests, as a solution, designing agencies in a way that ensures political control (Wood and Waterman, 1991; Gallo and Lewis, 2012). Yet, in the case of independent public agencies, such as regulatory agencies, this solution is structurally impossible as these bodies are *ex-ante* delegated with political independence (Gilardi, 2009). Hence, accountability has been seen as the central remedy for this democratic deficit (Majone, 1999).

On the other hand, a pluralistic approach, which builds on direct, participatory and deliberative democracy, has different expectations from public administration bodies (Durose et al, 2015). This approach dictates the administration to enable a broader array of actors, and perhaps the wider public, to scrutinise, participate and influence the governmental work (Papadopoulos and Warin, 2007). In practice, a pluralistic approach calls for mechanisms of transparency, participation and representation which reflect power-sharing (in different levels) from agencies to external actors.

These various qualities have been discussed in the public administration literature. Transparency, participation and accountability are the primary components of open government which many public administration scholars have addressed (for example, Meijer et al, 2012; Grimmlekihuijsen and Feeney, 2017). They have specifically been conceptualised as procedures that enhance throughput legitimacy of public administration organisations (Schmidt and Wood, 2019; Steffek, 2019). Representation has been studied mostly in the context of representative bureaucracy theory, with scholars aiming to explore the extent to which passive representation leads to active representation (for example, Miller and McTavish, 2014; Gilad and Dahan, 2021).

These qualities have been also studied in the specific context of regulatory agencies literature. These organisations have unique characteristics and tasks and are also designed in a significantly different way to traditional public administration. In the context of regulatory agencies political control is less relevant due to their independence by design (Gilardi, 2009). Accordingly, the literature has mainly focused on accountability as the most important democratic quality of regulatory agencies (for example, Scott, 2000;

Koop, 2011; Brandsma and Schillemans, 2013; Overman et al, 2020). Accountability has been defined as occurring when an actor, in a position of responsibility in relation to the interests of another actor, is required to give an account of the conduct of his duties, while the second actor can either reward or sanction the former (Scott, 2000; Maggetti, 2010). Another prominent definition is that of Bovens (2007), by which accountability is defined as a relationship between an actor and a forum, in which the actor is obliged to explain and justify his or her conduct, the forum can pose questions and pass judgement, and the actor may face consequences.

While the literature has mostly focused on accountability, other democracy enhancing qualities have been practised by regulatory agencies, either due to a formal requirement or voluntarily. Specifically, scholars identify that transparency, representation (or inclusiveness) and participation have been supplementing traditional modes of public accountability (Scott, 2015). These qualities have been seen as opening rulemaking and decision-making to external, non-state actors, such as interest groups (IGs), and the wider public, and hence democratising power by opening new channels of access and enabling the participation of marginalised actors (Thatcher and Stone Sweet, 2002; Koop and Lodge, 2020).

Transparency enables external actors, citizens, or interest groups, to scrutinise the regulatory decision making. It is 'associated with prescribed standards of making regulatory activities accessible and assessable' (Lodge, 2004; 127). Puppis et al (2014) analysed how transparency varies across independent regulatory agencies in different countries and sectors, and how they communicate with different actors: political actors, the regulated industry, and the general public. A recent experimental study on the effect of decision transparency on trust in the regulator was conducted and found that transparency is a trust enhancing tool under certain conditions (Grimmelikhuijsen et al, 2021). In general, transparency is perceived as virtuous for the prevention of arbitrary regulatory rulemaking and regulatory capture, as long as it is directed to the wider public, not merely to the regulatees (Carpenter, 2017).

Participation has also been studied in the context of regulatory agencies and seen as a mechanism that transfers power from the state to the people, providing 'voice' and open access to regulatory rulemaking (Papadopoulos and Warin, 2007). It is sometimes discussed in terms of 'openness in the practice of decision-making', allowing stakeholders and ordinary citizens to influence the regulatory process, thereby potentially empowering otherwise marginalised actors to participate in government decision-making (Thatcher, 2002; 966). However, scholars acknowledge that participation can sometimes be merely a box-ticking exercise, with no real influence on policy or performance. In such cases, participation can become meaningless or, equally unhelpfully, hijacked by sectoral interests, eroding regulatory legitimacy (Braun and Busuioc, 2020).

Woods (2009) described various types of mechanisms that states currently employ to encourage public participation in regulatory rulemaking and tested their effect on perceived influence of external actors. Later, Neshkova (2014) measured the degree of public input in the budget process of two regulatory agencies to analyse the extent to which various participatory mechanisms enable external actors to influence the decision-making. DeMenno (2019) measured participation in agency institutional design in a retrospective review of regulations in the United States. Most recently, Beyers and Arras (2020) ask to what extent EU agency consultations are dominated by regulated industries or by a more diverse set of stakeholders, and how varying participation patterns can be explained. Their findings reveal that a large majority of the submissions agencies receive via public consultations come from regulated industries.

Finally, representation has received the least attention in the regulation scholarship. A recent article performs an assessment of diversity regarding gender, nationality, educational qualifications and professional background among individuals serving on management boards and scientific committees of European Union agencies, many of them being regulatory bodies (Pérez-Durán and Bravo-Laguna, 2019). Other work focused on representation of agency boards, advisory or expert forums, and stakeholder groups members, examining whether they include stakeholders or interest groups (Arras and Braun, 2018; Perez-Duran, 2018).

To develop measures that assess these concepts simultaneously and compare them, it is especially necessary to ensure that there is no conceptual overlap between them. The literature review reveals some overlap between the concepts, and especially between accountability and the transparency and participation, and between participation and representation. The separated definitions offered are:

Transparency: the *disclosure* of information about the regulator, the regulatory decision-making process, and outcomes to *non-state actors*.

Accountability: the *disclosure* of information (and specifically reporting, answering, and justifying) to *state actors.*

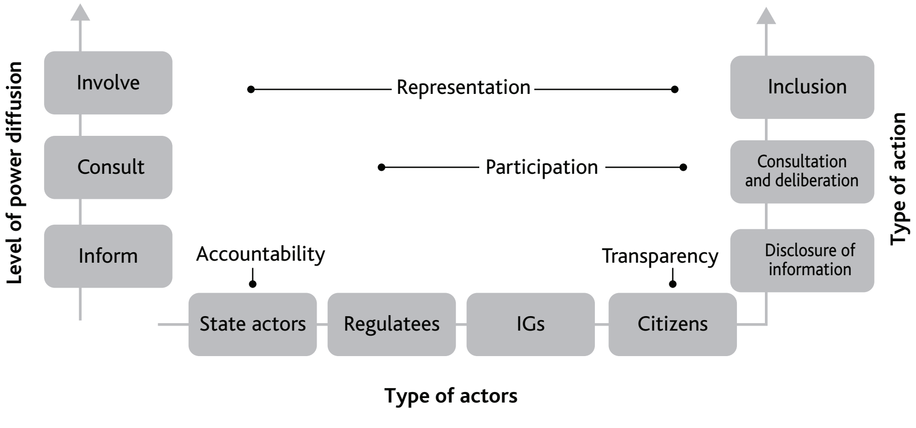
Representation: the extent to which the agency *includes state and non-state actors* in its decision-making bodies.

Participation: *consultation and deliberative procedures* that enable *non-state actors* to participate in the regulatory decision-making process.

These definitions highlight how the qualities are different in the type of action, the type of actor they are directed to, and the level of power diffusion (Figure 1). Types of action vary from disclosure of information, consultation and inclusion. Types of actors vary from: (1) interest groups; (2) regulated actors; (3) state actors; and/or (4) citizens.[1] These four democratic qualities also differ in the degree to which they involve actors outside the agency and the degree of power diffusion, ranging from 'informing', 'consulting', to 'involving' (Nabatchi, 2012; Neshkova, 2014).

The definition for accountability offered here focuses only on state actors. This definition is somewhat narrower from what has been proposed in the previous

Figure 1: Dimension of democratic qualities of regulatory agencies

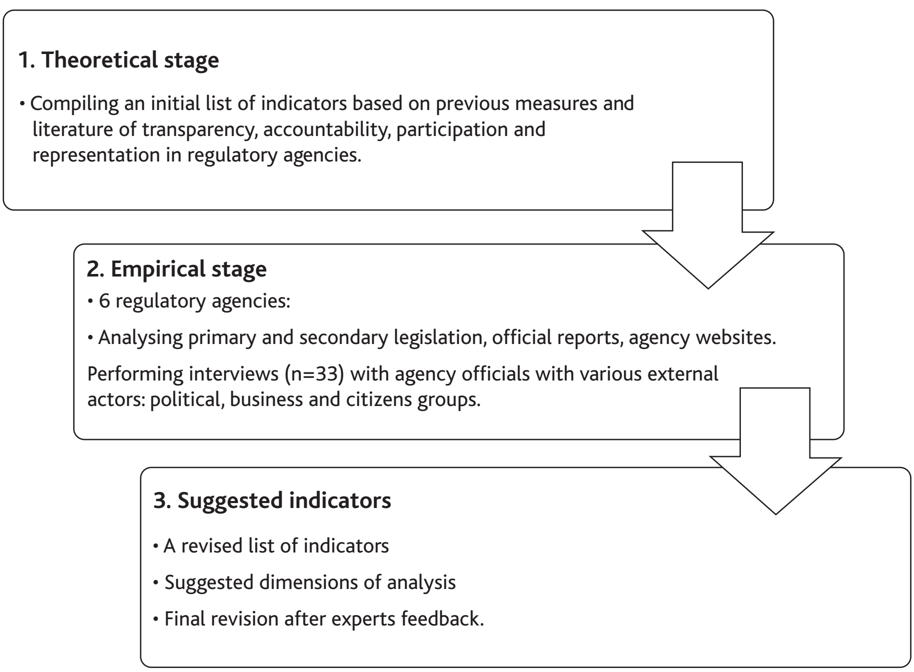


literature, seeing it as a relationship between an actor and a forum, in which the actor is obliged to explain and justify his or her conduct, the forum can pose questions and pass judgement, and the actor may face consequences (Bovens, 2007). Narrowing down accountability to reporting and justifying to state actors only, is necessary to enable the four democratic qualities to be measured separately, and is also compatible with other scholars who see it as occurring when an actor gives account of the conduct of their duties, while the second actor can either reward or sanction the former (Scott, 2000). It also resembles Busuioc's view of accountability as synonymous with *ex-post* control (Maggetti, 2010). The most prominent view of accountability over-stretches the concept to include within it transparency and participation (Mulgan, 2000). Hence, reversing this trend and using a narrower definition of accountability allows us to examine different qualities separately, and to assess the extent to which agencies are transparent, accountable, representative and/or participative.

Methodology

Systematising definitions for the concepts to be measured is the first necessary step to develop validated measures. The next steps should be the developing of indicators for scoring the cases, preferably based on some empirical testing (Adcock and Collier, 2001). Using qualitative methods in the process of developing a quantitative instrument allows for the development of a better-contextualised measurement tool and ensures that the measures include all relevant and important indicators (Creswell and Creswell, 2017). Hence, the methodology used in this article to develop measures of transparency, participation, accountability and representation in the context of regulatory agencies follows several steps (Figure 2).

Figure 2: Methodological approach



Revising previous measures

The first step involved the construction of an initial list of indicators based on previous measures and literature (DeVellis, 2016). To do so, existing measures of transparency, participation, accountability and representation in the context of regulatory agencies were assessed (Table 2).

Table 2: Previous measures of regulatory agencies

Authors	Concept	Indicators
Gilardi, 2002; Edwards and Waverman, 2006 Hanretty and Koop, 2009	Accountability	1. Agency's reporting obligation toward government 2. Agency's reporting obligation toward parliament 3. Government's ability to start an inquiry. 4. Parliament's ability to start an inquiry
Koop, 2011	Accountability	The obligation of the agency to: 1. provide the minister with information on request. 2. submit to the minister an annual plan. 3. submit to the minister an annual budget. 4. submit to the minister an annual activity report. 5. submit to the minister an annual financial report. 6. periodically evaluate the agency's functioning. The possibility for the minister to: 7. disapprove the agency's annual plan. 8. disapprove the agency's annual budget. 9. disapprove the agency's annual financial report. 10. take corrective measures vis-à-vis the agency. 11. dismiss the agency's executive head. 12. dismiss the agency's board members.
Maggetti, Ingold and Varone, 2013	Accountability	1. Information disclosure 2. Strength of the ties of the dyad
Jordana et al, 2018	Accountability	1. Annual reports are online 2. Civil society accountability – Advisory council – Consumers' office – Open consultations – Other – Public hearings 3. Minutes are online 4. Resolutions are online 5. Accountable to the executive 6. Accountable to the ministry 7. Accountable to the legislative
Bertelli, 2008	Openness and accountability	1. Public meetings 2. Public minutes 3. Members' interest registry
DeMenno, 2019	Participation	1. Exchanging information 2. Ensuring representative and responsive reviews
Arras and Braun, 2018	Participation	1. Presence or absence on the website of: a. Public consultations. b. Stakeholder bodies. c. Stakeholder representation in the management board 2. Arrangements for stakeholder involvement included in legal requirements
Perez-Duran, 2018	Representation	4. Interest group representation in agency management boards

Numerous quantitative measures have been proposed for measuring the accountability of regulatory agencies. Initially, measures of accountability were presented in the literature on regulatory agency independence, referred to as 'obligations to the legislature' or similar names (Edwards and Waverman, 2006; Hanretty and Koop, 2012). Later, other measures of accountability have been proposed that build on different definitions of accountability or attempt to capture different aspects of the concept. For example, some of the measures focus on the information that the actor provides to the forum (Jordana et al, 2018) while others focus on the discussion between actors and the forum (Koop, 2011). A more recent measure has been developed to measure felt accountability (Overman et al, 2020).

Accountability has gradually been 'overstretched' to include transparency, representation and participation, conceptualised as 'downward accountability' (Mulgan, 2000), which is reflected in the fact that the most comprehensive quantitative measure of regulatory agency organisational mechanisms included some transparency and participation indicators to measure accountability. For example, Jordana et al (2018) included in their measure of accountability the publication of minutes and resolutions, and practices of participation such as open consultations. Similarly, Bertelli (2008) has measured accountability by the publication of meetings and their minutes and publication of members' interest registry.

The problem, however, does not only lie in the fact that accountability has been extended and that it often overlaps with transparency, participation and representation, but also that indicators to measure these other qualities are sparse and only partially grasp how transparency and participation is executed nowadays by regulatory agencies. Agencies publish many types of information, much more than merely board resolutions and minutes, including the rules and standards to be followed, the activities of the regulatory agency, the decision-making process and justifications, feedback processes and information on the regulating actors (Lodge, 2004). In this sense, existing measures are not sensitive enough to grasp the multiple and distinct ways that agencies can practice transparency.

Another challenge with previous measures is that they have been developed with no justification, but rather arbitrarily chosen. In addition, they are not consistent, neither being clear about whether their indicators are useful for formal and legal practices, nor also for *de facto* practices of these qualities. Some focus on formal qualities, while others mix up and do both. This results in the existing measures not providing a way of knowing about the gap between what agencies are obliged to do and what they do voluntarily in terms of democracy-promoting mechanisms – but it is this gap that says the most about the extent to which a particular agency takes its democratic role seriously (Koop, 2014).

Hence, to develop an empirically informed measure of the democratic qualities of regulatory agencies, and to include indicators that grasp the rich ways in which regulatory agencies reflect transparency, participation, accountability and representation, a qualitative study has been performed.

Empirical study

In the second phase, six regulatory agencies were studied and analysed. This included the Mexican competition agency (COFECE), the UK food safety agency (Food Standards Agency), the UK care quality commission (CQO), the Israeli Competition

Authority, the Israeli Public Utility Authority for Electricity, and the Israeli Gas Authority. To ensure that the proposed indicators could be later applied to measure agencies in different sectors and countries, and therefore to allow for country and sector comparisons, a 'diverse' case selection method was used (Gerring, 2017). Accordingly, the agencies analysed come from three different countries with different structures, and four different sectors. However, the agencies are from democratic countries and OECD countries, which might limit the possibility to generalise and use the developed indicators to measure agencies in non-democratic countries and in developing countries.

In this stage, various written sources were considered, including agency websites, legislation (primary and secondary), reports and publications. In parallel, 33 semi-structured interviews took place between March 2019 and April 2020, mostly face-to-face, but in some cases by a video call. To ensure a diversity of approaches, motivations and interests, interviewees included senior staff from various departments within the agency, as well as external agency stakeholders, including political, business and civic groups, using an 'agency-sector network' approach (inspired by da Cruz et al, 2016). Agency websites were searched for department heads, specifically the communications, legal and economic departments, and the largest department that creates new regulations. Within external stakeholders, senior staff in business organisations, who are either regulated by the agency or were mentioned on the agency's website or in interviews as stakeholders involved were contacted. In terms of political stakeholders, members of parliament who served on commissions responsible for the relevant sectors were reached out to. Finally, civil organisations who were mentioned in interviews with agency officials and in media articles were also contacted to request an interview.

The interview questions were different between agency and stakeholder respondents. The agency staff respondents were first asked to describe in general terms the rulemaking and decision-making process in their agency. They were then asked to detail all the practices that the agency holds for ensuring transparency, participation, accountability and representation, indicating whether the practices were voluntary or mandatory. In the case of voluntary practices, they were asked to explain the rationale for using these mechanisms. Finally, the initial list of indicators (based on previous measures) was presented, and they were asked to provide information on the extent to which the agency complies with them.

Agency network respondents were first asked to describe how they perceive the regulatory agency in question and how they participate in its decision-making. They were also asked about the proposed indicators to corroborate the information from the agencies and asked about mechanisms they would like the agency to develop. Although some discrepancies were expected between agency respondents and stakeholders, there were no discrepancies in the description of agency practices. Differences were noted in the description of the relationship, with some agency staff describing a more positive and trusting working relationship, while some stakeholders described a more strained and distrustful relationship.

After this, the initial indicators list was revised, and the final list of indicators and the dimension of analysis was constructed. To further validate the suggested indicators, they were presented to regulation scholars in several academic conferences, and regulation experts and practitioners were individually consulted, and who provided feedback on the indicators and their applicability. These valuable comments informed the final revision of the indicator list.

Undoubtedly, it is a challenge to construct measures that are applicable to regulatory agencies which differ in various aspects. They operate in different sectors and countries and are assigned different organisational tasks. The mechanisms of governance are also structured differently, sometimes with a managing board, other times with advisory boards, or with none. To address these differences and develop indicators that can be used to measure all types of regulatory agencies, it is suggested that a differentiated scoring system which allows for variations without affecting the overall score is used. The supporting materials[2] include an illustration of using the developed indicators, executing a differentiated scoring system, and only considering applicable indicators when calculating the average score per quality.

The suggested indicators and discussion

The following section presents the indicators developed to measure transparency, participation, accountability and representation in the context of regulatory agencies (Table 3). It also reflects on the difference from the previous measures and discusses how the empirical study informed the creation of new indicators.

Indicators of transparency

Transparency indicators reflect different types of information that a regulatory agency can publish. While the initial list of indicators, derived from the previous measures, only included the publication of board minutes, resolutions, new regulations, annual reports and board member's interest registry, the qualitative study revealed that agencies publish a much wider list of information. Each type of information is a different indicator of transparency that an agency does or does not publish. The measure of transparency offered includes significantly more indicators than other qualities, reflecting the variety of information that agencies can publish. However, when grouped to clusters by information type, their scope is similar to the other qualities. A total of 22 different indicators were identified and they can be distributed across five clusters (building on Lodge, 2004):

1. the rules and standards to be followed
2. the activities of the regulatory agency
3. the decision-making process and justifications
4. feedback processes
5. information on the regulating actors

The first cluster of indicators includes the rules and standards to be followed. This cluster includes an indicator that refers to the publication of new rules that have already been adopted (1). This is the most basic type of transparency, which was also included in previous measures. It is considered the most basic level of an agency's transparency, allowing regulators and the public to know the rules they are expected to follow.

The second cluster includes indicators that reflect the actual activities of the regulatory agency after the 'rules of the game' have been established. This cluster includes the publication of enforcement decisions (2), which refer to decisions taken by the agency against certain regulated actors, such as the withdrawal of a licence, the imposition of fees, and so on. This cluster also includes the publication of annual activity reports (3),

Table 3: Suggested indicators

TRANSPARENCY		**ACCOUNTABILITY**	
The rules and standards to be followed	1.The publication of new regulations	**Ex-post report**	23.The submission of activity report to legislative
The activities of the regulator	2.The publication of enforcement decisions		24.The submission of financial report to legislative
	3.The publication of annual activity report		25.The submission of activity report to executive
	4.The publication of annual financial report		26.The submission of financial report to executive
	5.The publication of annual FOI report	**Ex-ante report**	27.The submission of annual plan to legislative
The decision-making process and justifications	6.The publication of methodological guidelines		28.The submission of budget plan to legislative
	7.The publication of strategic plans		29.The submission of annual plan to executive
	8.The publication of justifications for new regulations		30.The submission of budget plan to executive
	9.The publication of impact assessments on new regulations	**Ad hoc report**	31.Ad-hoc information – on request to legislative (hearings)
	10.The publication of justifications for decisions		32.Ad-hoc information – on request to executive
	11.The publication of board minutes (if applicable)		33.Ad-hoc information – proactive – to legislative
	12.The publication of recorded board meetings (if applicable)		34.Ad-hoc information – proactive – to executive
	13.The publication of board resolutions (if applicable)		
	14.The publication of advisory board decisions (if applicable)		
	15.The publication of advisory board minutes (if applicable)		
Feedback processes	16.The publication of proposed regulations before their adoption		
	17.The publication of comments received on proposed regulations before their adoption		
	18.The publication of the publication of details/report of deliberative processes		

(*Continued*)

Table 3: (*Continued*)

TRANSPARENCY		**ACCOUNTABILITY**	
Information on the regulating actors	19.The publication of organizational structure		
	20.The publication of personnel data		
	21.The publication of members' interest's registry		
	22.The existence of FOI officer		
PARTICIPATION		**REPRESENTATION**	
Consultations on proposed regulations	35.Holding hearings – inviting regulatees	**Managing board representation**	47.Representation - of political actors in the management board
	36.Holding hearings – inviting IGs		48.Representation - of regulatees in the management board
	37.Holding hearings – inviting the public		49.Representation - of IGs in the management board
Deliberative procedures	38.Holding round tables or focus groups – inviting regulatees		50.Representation - of citizens in the management board
	39.Holding round tables or focus groups – inviting IGs	**Advisory board representation**	51.Representation - of political actors in the advisory board
	40.Holding round tables or focus groups – inviting the public		52.Representation - of regulatees in the advisory board
User surveys	41.Carrying out surveys – distributing to regulatees		53.Representation - of IGs in the advisory board
	42.Carrying out surveys – distributing to IGs		54.Representation - of citizens in the advisory board
	43.Carrying out surveys – distributing to the public	**Stakeholder group representation**	55.Representation - of political actors in the stakeholder group
Open Board meetings	44.Management board meetings open to the regulatees		56.Representation - of regulatees in the stakeholder group
	45.Management board meetings open to IGs		57.Representation - of IGs in the stakeholder group
	46.Management board meetings open to the public		58.Representation - of citizens in the stakeholder group

financial reports (4), and Freedom of Information (FOI) reports (5). From this cluster, only activity reports have been included in previous measures. The other three indicators were identified from the empirical study and particularly by analysing agencies' websites.

The third cluster includes indicators of the decision-making process in setting rules and their justifications. This cluster addresses the full range of activities that the agency undertakes prior to rulemaking, including nine different indicators: first, methodological guidelines (6), which may include technical standards followed by the agency, internal rules of procedure for decision-making, benchmarks or guidelines. Second, it includes the agency's strategic plans (7). It also includes justifications for regulations (8) and for enforcement decisions (9), and the publication of regulatory impact assessments (RIA) (10). None of these have been included in previous measures.

This cluster also includes five conditional indicators. If the agency has a managing board, three indicators are assessed: publication of board minutes (11), publication of video recordings of board meetings (12), and publication of board decisions (13). If the agency has an advisory board, two additional indicators are used: advisory board resolutions (14) and minutes (15). These are indicators that have been included in previous measures (Jordana et al, 2018), excluding the publication of video recordings of board meetings, which was identified in the UK food safety agency.

The fourth cluster, transparency of feedback processes, includes proposed regulations before their adoption (16), comments received on proposed regulations before their adoption (17), and reports on deliberative processes (18). This cluster depends on the existence of participatory practices, which are measured separately. Arras and Braun (2018) included an indicator for public consultations in their assessment of participation. However, the three indicators offered here are transparency derivatives that are assessed separately from the practice of public consultations. In addition, this article separately assesses whether there is a legal obligation to publish these indicators, whereas Arras and Braun focused only on website presence.

Finally, the fifth cluster includes information about the regulatory agency itself: organisational structure (19), which is information about the structure of the agency, a detailed list of departments and their hierarchy; the names and contact details of staff (20); and a register of interests, which includes the publication of a detailed conflict of interest for agency staff (21). This could include, for example, a specified list of the agency member's holdings that could give rise to a conflict of interest. While Bertelli included the publication of members' interest registry in his study of openness and accountability, the other indicators were added after analysing the agencies' websites and found present in most of them. The final indicator of the measure is the existence of a FOI officer (22). As this applies generally to all stages of regulatory decision-making, it does not fit any specific cluster.

According to the analysis of the six agencies, there is a variance in the publication of these items. Publishing a members' interest registry, for example, was the rarest. Other indicators, such as publication of annual reports, new regulation and decisions were found in most agencies. Even though the construction of these indicators was mostly based on the websites of agencies, the interviews have yielded insights. Most agency personnel interviewed mentioned that while the legal framework is quite parsimonious, they voluntary publish more types of information than required. In other words, the interviews revealed that there is a gap between agencies' formal obligation for transparency and their de-facto transparency levels.

Indicators of accountability

This proposed measure of accountability includes 12 indicators, clustered into three groups: *ex-post* accountability, *ex-ante* accountability and *ad-hoc* accountability. These indicators build much on Koop's indicators (Koop, 2011) but include only those indicators that fit the concept of accountability as disclosure of the agency actions to state actors. While some of the previous measures look at accountability in a broader view, including the extent to which other actors can hold the agency accountable (Hanretty and Koop, 2012; Koop, 2011) and other view it in a more abstract way, looking into the extent to which the agency is vulnerable (Apaydin and Jordana, 2020), the indicators offered in this article are focused on the actions and practices of the agency itself.

The first four indicators reflect *ex-post* reporting to political actors, either at the end of the year or the beginning of the following year. The first two are the submission of annual activity report (23) and annual budget report (24) to legislative actors. The third and the fourth are the submission of annual activity report (25) and annual budget report (26) to executive actors (Jordana et al, 2018).

The second cluster includes *ex-ante* reporting to political actors: the disclosure of strategic plans for the coming year(s), which include objectives, activities and performance plans to legislative actors (27), a disclosure of a budget plan for the following year(s) to legislative actors (28), the disclosure of strategic plans to executive actors (29) and a disclosure of a budget plan to executive actors (30).

While these first set of indicators is derived from previous studies, but narrowed down to avoid overlap, the next indicators are additions, which were developed after the interviews. The qualitative study found that agencies can be accountable to legislative and executive actors by justifying their actions on an *ad-hoc* basis. Interviews with agency personnel disclosed that meetings with a parent minister is a frequent practice. This is especially true in the case of the semi-autonomous Israeli agencies, which reported ad-hoc meeting with the parent minister. Accordingly, indicators that measure reactive but *irregular* acts of communication between legislative and executive actors and the regulatory agency (31+32) have been included.

The final two indicators measure proactive *ad-hoc* information disclosure (33+34) when the agency actively decides to share information with legislative and executive actors. This was added to the measure basing on several agencies that reported such proactive interaction.

Indicators of participation

The proposed measure of participation includes includes 12 indicators, which are grouped into four clusters. The first cluster includes indicators of the regulatory agency soliciting comments on proposed regulations prior to adoption. The indicators include hearings or consultation with the regulatees (35), with IGs (36) and with the public (37). Hearings could be physical events to which the agency invites stakeholders or the public to offer their views, or consultations via written hearings.

The second cluster includes deliberative processes such as roundtables and focus groups, which also could involve regulatees (38), IGs (39) and the wider public (40). These events tend to be deliberative in the sense that they facilitate a conversation about the strategy that the agency should pursue. The inclusion of these indicators was completely due to the findings from the qualitative study, that revealed that the electricity agency in Israel is regularly holding open consultations in the form of roundtables, on the plans of the agency and on specific issues. This practice is completely voluntary.

The third cluster includes a more quantitative type of consultation which agencies sometimes carry out as forms to achieve the participation of external actors in the regulatory work: surveys. These could include ongoing surveys or *ad hoc* surveys, directed to regulatees (41), IGs (42) or the wider public (43). This was identified in the case of the UK food safety agency.

The final cluster is dependent on the existence of a managing boards, measuring the extent to which their meetings are open to regulatees (44), IGs (45) and the wider public (46). These indicators were offered by previous measures (Jordana et al, 2018) and found to be still relevant, since the agencies analysed often hold such events. Again, the UK food safety agency holds board meetings that are open to the wider public, and in this sense, it is a unique case.

The agencies analysed in this study varied significantly in their level of participation. The UK agencies in the set were identified to have several mandatory obligations for holding participation practices. The Mexican and Israeli agencies, on the other hand, were found to have fewer mandatory obligations, but few voluntary practices were described in the interviews. Another interesting finding was that while both competition agencies included mainly regulatees in the participation procedures, the electricity, food safety and quality care agencies included a broader variety of participants in participation practices.

Indicators of representation

Twelve indicators are proposed to measure representation in regulatory agencies, largely based on previous measures (Perez-Duran, 2018; Arras and Braun, 2018). Specifically, it is proposed to measure the presence of four different groups (political actors, regulatees, IGs and citizens) on three different agency boards: management boards, advisory boards and stakeholder groups (47–58).

As mentioned earlier, regulatory agencies vary widely in their institutional design, with some having a managerial and advisory board and others not. This affects in particular indicators of representation, which include indicators on representation on managerial boards, on advisory boards and stakeholder groups, and which may not be relevant for all. Therefore, it is suggested that scores should be calculated only for those indicators that are relevant. That is, if an agency does not have a managerial board, for example, it should not receive a score of 0 on the indicators that ask if regulatees are represented in this body. Instead, the indicators that pertain to managerial boards should be excluded from the calculation of the final score. The supplementary material illustrates this.

Mandatory and voluntary democratic qualities

Finally, it is suggested that the indicators on two dimensions, mandatory and voluntary, should be measured. To analyse the mandatory dimension, the legal (*de-jure*) framework of the agency should be analysed to see if the agency is legally obligated to include the indicators. To analyse the voluntary transparency, the agencies should be first measured upon their de-facto dimension, asking: does the agency perform this indicator in practice? For example, to assess transparency in practice, agencies' websites should be analysed to see which of the indicators are published. To assess representation in practice, the composition of the agencies' managing board, advisory board and stakeholder groups should be analysed. To assess accountability and participation in practice, agencies could be asked directly whether they perform the various practices. After achieving *de jure* and *de facto* scores of the mechanisms, the voluntary level can be determined by subtracting the *de jure* score from the *de facto* score, that is, realising the mechanisms that prevail although the agency does not have a legal obligation to include it. An illustration of the way these dimensions can reveal discrepancies between the qualities is included in the supporting materials,[3] which include the complete scores of two regulatory agencies in Israel.

Voluntary democratic qualities are of value to the regulation scholarship and to the public administration scholarship since they advance democratic governance beyond legal requirements (Koop, 2014). Again, the regulatory scholarship has studied voluntary accountability, but has not yet explored voluntary transparency, participation and representation. Assessing this gap could reveal important findings. For example, an agency could have a legal obligation in either primary or secondary law to publish enforcement decisions, but the agency does not do so. Conversely, an agency could publish enforcement decisions without being formally obliged to do so. Assessing voluntary democratic mechanisms is important in order to understand the degree of discretion which agencies have, not only in establishing and enforcing regulations, but also on designing mechanisms in which they involve other actors in their work. The result is a framework that does not lead to a determination of 'more' or 'less' democratic agencies, but rather allows us to capture the particular type of democracy that agencies promote, the actors that are included and the extent of formalism.

Conclusions

This article develops indicators to assess mandatory and voluntary levels of democratic qualities of regulatory agencies, namely transparency, accountability, participation and representation. By capturing the extent to which agencies are characterised by organisational practices and mechanisms that share power to different types of non-state actors vis-à-vis political actors, these indicators make it possible to systematically measure and compare the extent to which regulatory agencies exhibit pluralistic democratic governance or continue to adhere to traditional notions of representative democracy. In this way, the article moves the literature forward from the discussion on whether delegating power to non-majoritarian bodies is a democratic act, to assess the various ways in which independent bodies can nonetheless contribute to democracy.

This distinction between representative democracy and pluralistic democracy resembles Arend Lijphart's distinction between majoritarian and consensus democracy, which differ in the way power is concentrated (Lijphart, 2007). This is a distinction that contributes to the scholarship of regulation, since it acknowledges that regulatory agencies can be democratic in various ways, sharing power with different actors. Moreover, this distinction is also useful to reveal whether agencies share power mostly with the regulatees. This might suggest a third type of democracy, a corporatist or tripartism, a process or situation where IGs have significant power in government (Ayres and Braithwaite, 1991). Several scholars have discussed the potential of regulatory agencies to lead to regulatory capture, and using these indicators to grasp whether participation and representation is directed only at regulatees might enable this.

The compatibility of regulatory agencies with democracy has not been fully explored in the literature. While scholars have focused mainly on accountability and developed quantitative measures that led to the construction of broad databases, other democratic qualities have not received similar attention. This left a methodological gap, making it impossible to assess the role which regulatory agencies play in advancing democratic norms, and whether they move toward more pluralistic, open modes of governance (Scott, 2015; Koop and Lodge, 2020).

Previous measures, especially the comprehensive and systematic ones, focus mainly on accountability as an umbrella concept that often includes transparency, participation and representation. This article offers definitions that conceptually separate these previously overlapped qualities. This enables separate measures to be built which allows researchers to compare democratic qualities and learn more about how regulators can make tradeoffs between them. In addition, the indicators developed in this article increase the sensitivity of previous measures of transparency, participation and representation, which tend to focus on single or very few elements, which does not capture the full range of activities that regulatory agencies undertake with respect to these qualities. This is done by expanding the number of indicators, which allows us to capture enough variance in the concepts we want to capture.

The content and convergent validity of the indicators is assured through the qualitative study, that analysed various and diverse regulatory agencies. Content validity concerns the extent to which a measurement reflects the full content of the intended systematised concept, and it is achieved when the design and development of an instrument follows a rigorous process such as in this study (Adcock and Collier, 2001). However, further empirical validation of the indicators is still needed. In particular, additional data is necessary to complete the index construction, validate the indicators and develop a more sophisticated weighting system and aggregation method.

In this sense, this article is the first step in a broader research agenda aimed at developing an empirically informed theory of democratic regulatory governance. By using the suggested indicators to collect data on a broad sample of regulatory agencies, researchers can answer various open questions including on the relation between democratic qualities and political independence (do independent agencies compensate for their lost democratic legitimacy by increasing democratic qualities?) the relation between the use of certain qualities in certain regulatory sectors (are agencies which work on social regulation more democratic?) and between themselves (do agencies make trade-offs between qualities?). Collecting a broad-based dataset can also facilitate hypothesis exploration on the drivers and effects of democratic qualities. For example, do regulatory agencies with more democratic qualities enjoy higher levels of trust by the different actors in the regulatory regime?

Broader public administration scholarship can also gain insights from the measurement of democratic qualities, and future work could adapt the indicators to the context of non-independent administrative organisations, such as ministerial departments, and explore the extent to which these bodies reflect democratic qualities, beyond political control. Such analysis is necessary because the role that bureaucracies as a whole play in democracy is changing.

Notes

[1] This resembles Frederickson's classification of the possible 'public' which public administration should strive to include (1991).

[2] Can be found in https://osf.io/qn2p3/?view_only=2866db2df08c46dfae713563a374d2e0

[3] https://osf.io/qn2p3/?view_only=2866db2df08c46dfae713563a374d2e0

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Conflict of interest

The author declares that there is no conflict of interest.

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SUPPORTING MATERIAL

To demonstrate the workability of the proposed indicators, the measures were applied to two illustrative cases: The Public Utility Authority for Electricity in Israel and the Competition Authority in Israel. Both are regulatory agencies with broad discretionary powers and authority, operating in two different regulatory areas and with varying degrees of independence (managerial and political). Measuring their democratic qualities using the proposed measures reveals new information and highlights the contribution of the measures to understanding the voluntary democratic behavior of the agencies and the extent of inclusiveness, i.e., which group is included in regulatory decision making. In particular, the measure allows us to uncover the difference in democratic qualities across agencies and shows that the electricity agency is more democratic when it comes to participation and accountability. This result could be explained by the political dependence of the agency and by its mission to open the electricity market in Israel, which requires opening the regulatory process to social actors.

This demonstration also allows us to test the convergent validity of the measures. Convergent validity is assessed by comparing the scores achieved in a proposed measure with the scores achieved by previous measures (Adcock and Collier 2001). When comparing the scores achieved by this proposed measure with the scores achieved by the Jordana et al. (2018) measure, it is found that both measures score the accountability of the Israeli electricity authority higher than the Israeli competition authority, suggesting strong validity.

To assess the democratic qualities of the two agencies, and compare them, the following scoring system was applied:

1. Each indicator was measured on two dimensions, the mandatory and the *de facto* dimension, on an ordinary scale developed differently for each quality (Table 1). The agencies were measured building on interview data and on the basis of the analysis of the website and other agency publications.

Table 1: Measurement scale for illustration

Quality	Dimension of analysis	Value
Transparency	**De facto:** Is this type of information published by the agency?	never (0), rarely (0.33), very often (0.66), always (1).
	Mandatory: Is there a legal obligation to publish?	no (0), partially (0.5), yes (1)
Accountability	**De facto:** Is this indicator performed by the agency?	never (0), rarely (0.33), very often (0.66), always (1).
	Mandatory: Is there a legal obligation for this indicator?	no (0), partially (0.5), yes (1)
Representation	**De facto:** Is this indicator performed by the agency?	no (0), partially (0.5), yes (1)
	Mandatory: Is there a legal obligation for this indicator?	No representation (0) All members (1) Relative score (0.5 means half of the board, etc).
Participation	**De facto:** Is this indicator performed by the agency?	never (0), sometimes (0.5), very often (1).
	Mandatory: Is there a legal obligation for this indicator?	no (0), partially (0.5), yes (1)

After filling the scoring table (Table 2), the scores were standardized. Table 3 presents the non-standardized score and Table 4 the standardized scores. The standardized score was achieved by multiplying the sum of the indicators in each quality by 100 and dividing by the number of applicable indicators only. For example, the competition agency does not have a managing board, so the indicators related to a board were not assessed, and the total score was achieved by calculating the sum score divided by the number of applicable indicators. In this way, the results of both agencies can be compared in a fair way. The findings are also presented as graphs, after the tables.

Table 3 - Non-Standardized scores

	Competition Agency				**Electricity Agency**			
	State actors	**Regulatees**	**IGs**	**Public**	**State actors**	**Regulatees**	**IGs**	**Public**
Transparency - De facto	0	0	0	11.66	0	0	0	12.01
Transparency - Mandatory	0	0	0	6.5	0	0	0	6
Transparency - Voluntary	0	0	0	5.16	0	0	0	6.01
Participation - De facto	0	1.5	1	0	0	2.5	2	2.5
Participation - Mandatory	0	1	1	0	0	0.5	0	0
Participation - Voluntary	0	0.5	0	0	0	2	2	2.5

Accountability - De facto	2.66	0	0	0	5.33	0	0	0
Accountability - Mandatory	1	0	0	0	5	0	0	0
Accountability - Voluntary	1.66	0	0	0	0.33	0	0	0
Representation - De facto	0	0	0	1	0.5	0	0	0.5
Representation - Mandatory	0	0	0	1	0.5	0	0	0.5
Representation - Voluntary	0	0	0	0	0	0	0	0

Table 4 - Standardized Scores

	Competition Agency				**Electricity Agency**			
	State actors	**Regulatees**	**Interest groups**	**Public**	**State actors**	**Regulatees**	**Interest groups**	**Public**
Transparency - De facto	0	0	0	61.36842	0	0	0	60.05
Transparency - Mandatory	0	0	0	34.21053	0	0	0	30
Transparency - Voluntary	0	0	0	27.15789	0	0	0	30.05
Participation - De facto	0	50	33.33333	0	0	62.5	50	62.5
Participation - Mandatory	0	33.333333	33.33333	0	0	12.5	0	0
Participation - Voluntary	0	16.666667	0	0	0	50	50	62.5
Accountability - De facto	44.333333	0	0	0	88.833333	0	0	0
Accountability - Mandatory	16.666667	0	0	0	83.333333	0	0	0
Accountability - Voluntary	27.666667	0	0	0	5.5	0	0	0
Representation - De facto	0	0	0	100	50	0	0	50
Representation - Mandatory	0	0	0	100	50	0	0	50
Representation - Voluntary	0	0	0	0	0	0	0	0

Table 2 - Competition and Electricity Full scores

			Frequency		Formality	
			Competition	Electricity	Competition	Electricity
Transparency	The rules and standards to be followed	1. The Publication of New regulations	1	1	1	1
	The activities of the regulator	2. The Publication of Enforcement decisions	1	1	1	0.5
		3. The Publication of Annual activity report	1	1	0	0
		4. The Publication of Annual financial report	0	0	0	0
		5. The Publication of Annual FOI report	1	1	1	1
	The decision-making process and justifications	6. The Publication of Methodological guidelines	1	0.67	0	0
		7. The Publication of Strategic plans	0	0	0	0
		8. The Publication of Justifications for new regulations	1	0.67	0	0
		9. The Publication of Impact assessments on new regulations	0.33	0.67	1	1
		10. The Publication of Justifications for decisions	1	0.33	0	0
		11. The Publication of Board minutes (if applicable)	NA	0	NA	0
		12. The Publication of Recorded board meetings (if applicable)	NA	0	NA	0
		13. The Publication of Board resolutions (if applicable)	NA	1	NA	1
		14. The Publication of Advisory board decisions (if applicable)	0.33	NA	0.5	NA
		15. The Publication of Advisory board minutes (if applicable)	0	NA	0	NA

	Feedback processes	16. The Publication of Proposed regulations before their adoption	1	1	1	0.5
		17. The Publication of Comments received on proposed regulations before their adoption	0	0	0	0
		18. The Publication of The Publication of Details/report of deliberative processes	0	0.67	0	0
	Information on the regulating actors	19. The Publication of Organizational structure	1	1	0	0
		20. The Publication of Personnel data	1	1	0	0
		21. The Publication of Members' interest's registry	0	0	0	0
		22. The existence of FOI officer	1	1	1	1
Accountability	Ex-post report	23. The submission of Activity report to legislative	0	0	0	0
		24. The submission of Financial report to legislative	0	0	0	0
		25. The submission of Activity report to executive	0.33	1	0	1
		26. The submission of Financial report to executive	0	0	0	0
	Ex-ante report	27. The submission of Annual plan to legislative	0	0	0	0
		28. The submission of Budget plan to legislative	0	0	0	0
		29. The submission of Annual plan to executive	0	1	0	1
		30. The submission of Budget plan to executive	1	1	1	1
	Ad hoc report	31. Ad-hoc information – on request to legislative (hearings)	1	0.33	0	0

		32. Ad-hoc information – on request to executive	0.33	1	0	1
		33. Ad-hoc information – proactive – to legislative	0	0	0	0
		34. Ad-hoc information – proactive – to executive	0	1	0	1
Participation	Consultations on proposed regulations	35. Hearings – to regulatees	1	1	1	0.5
		36. Hearings – to interests groups	1	1	1	0
		37. Hearings- to the public	0	1	0	0
	Deliberative procedures	38. Round tables and focus groups – inviting regulatees	0.5	1	0	0
		39. Round tables and focus groups – inviting interest groups	0	1	0	0
		40. Round tables and focus groups – inviting the public	0	1	0	0
	User surveys	41. Surveys – to regulatees	0	0	0	0
		42. Surveys – to interest groups	0	0	0	0
		43. Surveys – to the public	0	0.5	0	0
	Open Board meetings	44. Open to the regulatees managing board meetings	NR	0.5	NR	0
		45. Open to the interest groups managing board meetings	NR	0	NR	0
		46. Open to the public managing board meetings	NR	0	NR	0
Representation	Managing board representation	47. Representation - of political actors	NR	0.5	NR	0.5
		48. Representation - of regulatees	NR	0	NR	0
		49. Representation - of IGs	NR	0	NR	0
		50. Representation - of citizens	NR	0.5	NR	0.5
	Advisory board representation	51. Representation - of political actors	0	NR	0	NR
		52. Representation - of regulatees	0	NR	0	NR

		53. Representation - of IGs	0	NR	0	NR
		54. Representation - of citizens	1	NR	1	NR
	Stakeholder group representation	55. Representation - of political actors	NR	NR	NR	NR
		56. Representation - of regulatees	NR	NR	NR	NR
		57. Representation - of IGs	NR	NR	NR	NR
		58. Representation - of citizens	NR	NR	NR	NR

Figure 1 - Total scores

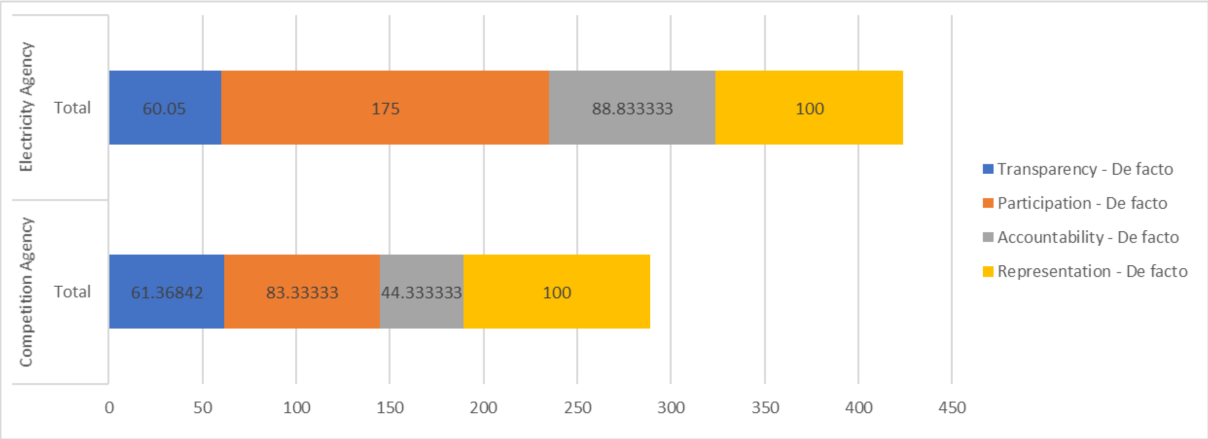


Figure 2 – Total scores by actor

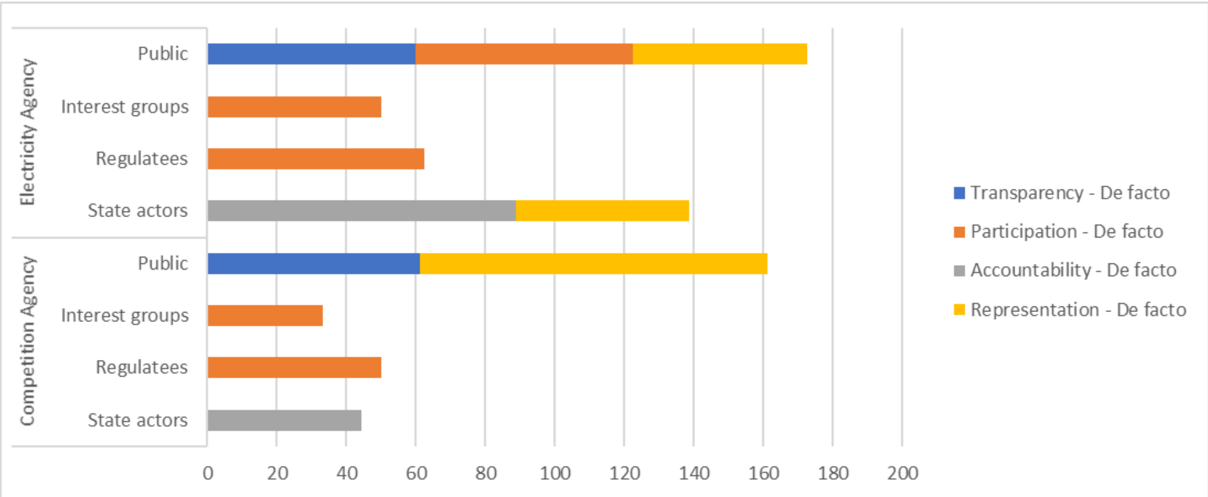


Figure 1 shows the total score each agency received for the four qualities. Overall, the measurement shows that the electricity agency is more democratic than the competition agency. When looking into the different qualities, it is evident that the agencies score almost the same on transparency and representation. However, the electricity agency appears to be more democratic when it comes to accountability and participation.

Figure 2 shows that when examining the type of actors which the agency include in their democratic qualities, it is evident that the competition agency involves less state actors. This finding and the lower level of accountability make sense when taking into account the higher political independence this agency has. While the electricity agency is politically dependent, it is more accountable to political actors. The scholarship on accountability has already established similar dynamics between independence and accountability (Schillemans and Busuioc 2015). It has also been delegated with the task of opening the electricity market in Israel, explaining why it has been practicing many participation procedures that aim to involve external actors.

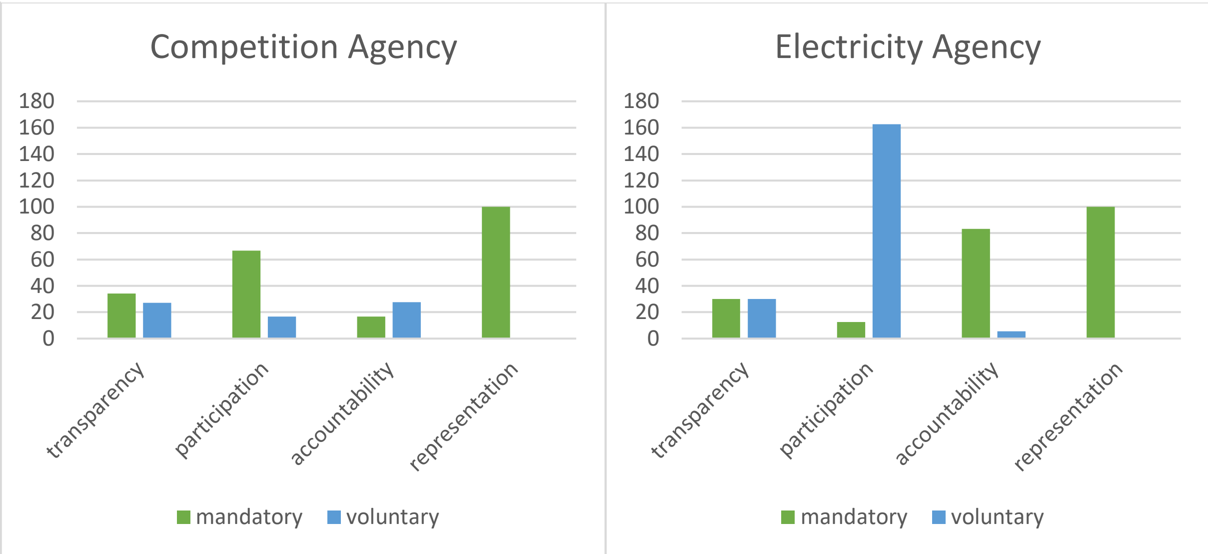
The figure also shows that the agencies are different when it comes to the type of actors that are represented in the agencies' bodies. In the electricity agency, only state actors are represented on the board; other groups such as regulators or interest groups are not represented. On the other hand, the competition agency's advisory board includes only professionals and academics with knowledge in competition law. Moreover, the legal framework of the competition agency provides that the advisory board should contain a sufficient proportion of women, an obligation that the electricity agency does not have.

The figure shows that the electricity agency is more inclusive than the competition agency. While the electricity agency invites citizen groups for consultations, the competition agency only invites regulators or registered stakeholders to these hearings. The interviews confirmed that the competition agency does not conduct consultations that are open to the public. Combined with the other findings, it is made evident that the competition agency is inclusive when it comes to transparency, and more exclusive when it comes to participation.

Finally, Figure 3 shows that there is a significant variance between the voluntary and formal democratic qualities of the two agencies. The electricity agency is obliged to be less transparent than the competition agency but acts rather voluntarily on this point. At the same time, the competition agency is legally obliged to be more transparent and shows less voluntary transparency. This leads to an overall similar level of transparency, which may suggest that there is alignment or diffusion between the agencies, to perform equally in terms of transparency (Jordana and Levi-Faur 2011).

Clearly, these findings should be explored more systematically, and hypotheses should be developed and tested appropriately. However, the purpose of presenting these findings is to illustrate how the indicators developed in this paper can be used to evaluate and compare regulatory agencies. Nonetheless, the measures add new information about the interrelationships between voluntary and mandatory accountability that previous measures did not consider because they focused on one of these aspects at a time. In particular, the results show that the competition authority implements voluntary accountability measures in the absence of mandatory ones, which calls for further studies to understand this dynamic.

Figure 3 - Mandatory vs Voluntary democratic qualities



Paper #2

Do Regulators' Democratic Qualities increase Willingness to Trust Companies? An Experimental Study

Libby Maman

Status: Unpublished

Do Regulators’ Democratic Qualities increase Willingness to Trust Companies? An Experimental Study

Libby Maman

Abstract

Many technological developments that have the potential to improve the overall standard of living often impose certain risks for their users. Previous studies have shown that people rely on regulatory institutions to mitigate these risks and trust companies and their technologies. This paper aims to better understand the role of regulation in cultivating public trust in companies. In particular, it addresses the extent to which a regulator's democratic qualities of transparency, participation, inclusiveness, and accountability increase trust in companies. To this end, this paper conducts an experimental survey on an Israeli sample (N=1984) to test the hypothesis that all four democratic qualities of regulatory agencies increase trust in firms, assuming that the underlying mechanism is that this positive effect is mediated by higher trust in the regulators. The survey described on a fictitious Fintech technology that requires full access to personal financial data and a regulatory agency employing command-and-control regulation. The results show that inclusiveness has a direct and positive impact on trust in the company and that having a combination of democratic qualities has an indirect effect on trust in the company, mediated by trust in the regulator. This paper contributes to the understanding that regulatory agencies should increase their democratic qualities to ensure the optimization of the economy and market.

Introduction

Public trust in the government is accepted to be a virtue, a social capital which is necessary both as an end in itself (Putnam 1993), and as a means to other goals such as increasing compliance and the likelihood of voting (Grönlund & Setälä 2007; Levi, Sacks, & Tyler 2009). Research shows that low levels of public trust in governments can negatively affect the ability of governments to effectively carry out their policies (Braithwaite & Levi 1998). In addition, the erosion of political trust can lead to movements and protests the government and can threaten stability (Mishler & Rose 2005). Previous studies have established a relationship between practices of open governance, such as transparency, participation, and inclusiveness, and trust in public organizations. These studies have shown that these practices increase citizens' trust in public organizations as well as their satisfaction and perceptions of legitimacy (Kim and Lee 2012; Ingrams, Kaufman, and Jacobs 2020; Schmidthuber, Ingrams, and Hilgers 2020; Grimmelikhuijsen et al. 2021).

In the context of regulatory agencies, trust has several positive outcomes. First, trust can improve regulatory compliance (Levi, Sacks, and Tyler 2009). Second, it is an important determinant of trust in regulated companies (Maman, Feldman & Levi-Faur, under review). Trustworthy regulators increase people's trust in firms and products regulated by that agency, and greater trust in companies leads to a greater willingness to use new products, which increases overall economic welfare (Bronfman et al. 2015).

This paper aims to explore more in depth the conditions in which trust extends from regulators to companies. Specifically, it asks whether the democratic qualities of the regulatory agency, including transparency, participation, inclusiveness, and accountability, increase trust in regulated companies. In other words, do these practices of regulators also play a role in cultivating trust in regulated business and in the willingness of people to use new technologies?

It assumes that this effect is mediated through higher trust in the regulated agency, building on the literature on the antecedents of trust in public organizations.

To answer these questions, this study carried out an experimental survey on a representative sample of Israeli citizens (N=1984). The experiment focused on the regulation of a Fintech company and on the context of data protection. The democratic quality of the regulatory agency was manipulated including: (1) transparency (2) participation, (3) accountability, (4) inclusiveness, and (5) a regulatory agency with all four qualities. Two outcome variables were measured, including trust in the Fintech company, and trust in the regulatory agency.

The findings show that democratic qualities of a regulator do increase both trust in the regulator and trust in the company. However, this only occurs when the regulator has a combination of all four qualities, in comparison to only one. A mediation analysis confirms that regulatory agencies with various democratic qualities enjoy higher trust which is then transmitted to trust in the company. However, the findings also show that inclusiveness has a direct, unmediated, effect on trust in the company.

The remainder of the paper is organized as follows. Part 1 introduces the theoretical framework discussing trust in regulatory agencies and in companies and the hypotheses regarding democratic qualities and trust. Part 2 describes the methodology, experimental design and descriptive statistics on the sample. Part 3 presents the results and tests the hypotheses. Part 4 discusses and concludes.

1. Theoretical Framework

Public trust in the government is accepted to be a virtue, a social capital which is necessary both as an end in itself (Putnam 1995), and as a means to other goals such as increasing compliance, stability, legitimacy and the likelihood of voting (Mishler and Rose 2005; Grönlund and Setälä 2007; Levi, Sacks, and Tyler 2009). In addition, studies show that low levels of public trust in governments can negatively affect the ability of governments to effectively carry out their policies (Braithwaite & Levi 1998). Trust has also been increasingly studied in the context of regulation, where it has been recognized that trust in the regulatory agency increases acceptance of and compliance to its regulations and decisions (Zannakis, Wallin and Johansson 2015).

1.1. Trust in regulatory agencies

Acknowledging its importance, several scholars have studied the drivers of trust in public and regulatory bodies, asking what explains higher levels of trust. Variations in the level of trust toward public organizations have been examined with two different perspectives: cultural or institutional. The culturalist explanation highlights the role of long-term processes that lead to the development of shared norms and values that differ across societies, such as civic values, social capital, post-materialism, interpersonal trust, and so on (Levi-Faur et al., 2020).

On the other hand, the institutionalist explanations see trust in public organizations not as a attribute of societies, but rather as a variable that derives from the performance of the organizations themselves and their perceived quality (Hetherington 1998; Khan 2016). Among these institutional explanations, studies found evidence that ‘good governance’ qualities positively affect citizens’ trust in public organizations (Svallfors, 2013; Yousaf, Ihsan and Ellahi, 2016). The observation that people are preoccupied with not just political outcomes but also the morality of the processes leading to these outcomes is supported by decades of research (Bøggild & Petersen 2016).

It is possible to distinguish between two types of good governance, or trust enhancing qualities: moral based qualities, and competence-based qualities (Metlay 1999), and both have been found to have a positive effect on trust in regulatory agencies. For example, Osman et al. (2018)

found that informing respondents on both the expertise of the FDA and on its commitment to protect the public, increases positive attitudes toward FDA regulations, comparing to a control group. When it comes to moral-based qualities, scholar focused mostly on what is called open-governance practices (Schmidthuber, Ingrams, and Hilgers 2020), or democratic qualities (Maman, 2022). While open governance mainly refers to transparency and participation, democratic qualities also include other practices that share power to external actors, including transparency, accountability, participation, and inclusiveness (Maman 2022).

Participation has found to increase trust in governmental organizations (Wang and Wan Mart 2007). Based on cross-country data, Schmidthuber, Ingrams and Hilgers (2020) found that structural openness characteristics of a country, which includes indicators of both transparency and participation, positively influences citizen trust in government. Another study, focusing on e-governance, a form of public participation, also found evidence that participation increases satisfaction with government (Kim and Lee 2012). Another study finds positive effects of both transparency and participation on several outcomes (satisfaction, trustworthiness, and perception of fairness) (Ingrams, Kaufman, and Jacobs 2020). When it comes to inclusiveness, studies found that levels of citizens' trust in bureaucracies is higher when an impartial and gender representative public administration exists (Choi, 2018).

These qualities have been studied by regulation scholars, acknowledging that regulatory agencies differ in the extent of which they are formally obliged to include them, but also on the *de-facto* level of transparency, accountability, participation and inclusiveness they ought to have. However, when it comes to understanding whether democratic qualities impact public trust in the context of regulatory agencies, very few studies addressed this question.

Regulatory agencies have come under some pressure to disclose information about their methods, procedures, and decisions with the idea of fostering both accountability and public trust. However, while some studies found a positive correlation between transparency and trust in the regulatory agency other studies found that this effect is only true in some regulatory domains (Grimmelikhuijsen et al. 2021) and in some countries more than others (Grimmelikhuijsen, Porumbesco, Hong and Im 2013).

In addition, a study from 2015 found that perceptions about the regulatory body adhering to the equality principle will increase acceptance of its decisions (Zannakis et al. 2015). In addition, public consultations were found to increase the acceptance and the legitimacy of the procedures made by regulatory agencies, but not necessarily the acceptance of the decisions (Beyers and Arras 2020).

Taken together, it could be hypothesized that each of these democratic qualities; transparency, participation, accountability, and inclusiveness, increase trust in regulatory agencies[1]. Also, it could also be assumed that a regulatory agency that has all four qualities will enjoy higher trust than an agency with only one, and of course, with none. Hence the following hypothesis could be drawn:

H1: *Democratic qualities of the regulatory agency increase public trust in the regulatory agency.*

1.2. Trust in regulated companies

In the context of regulation, trust is a positive value for several reasons. First, trust can improve regulatory compliance (Levi, Sacks, and Tyler 2009). Second, it is an important determinant of trust in regulated companies (Kim and Kim 2018; Maman, Feldman & Levi-Faur, under review). Regulatory bodies play an important role in encouraging social and economic transactions in uncertain situations, by reducing the risk and serving as 'third-party trust

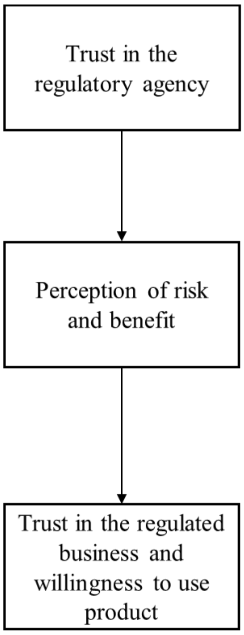
[1] When it comes to testing the effect of accountability in regulatory agencies on trust, to my knowledge no study has yet examined this relation. Yet, as a moral-based quality that reflects a basic democratic value of representativeness, it can be hypothesized that accountability as well, will increase trust in regulatory agencies.

providers' (Six and Verhoest 2017). Since they are not in the position to judge the trustworthiness of companies, neither their competence nor their integrity, citizens must rely on regulatory institutions to reduce and manage risks emerging from constant scientific and technological development (Cook, Hardin & Levi 2005). Hence, building on this logic, it feels safe to assume that when people trust the regulatory institution, this will also lead to more trust in the companies regulated by these regulators.

Empirical studies have confirmed this theoretical argument, finding that citizens have more trust toward businesses and are more willing to accept risks when they trust the regulatory organization (Eiser et al. 2002; Bronfman and Vázquez 2011; Bronfman et al. 2015; Bearth, Cousin and Siegrist, 2016). In addition, it was found that when it comes to open-banking Fintech apps and automated vehicles, people also have more intentions to use new technologies when they trust the regulatory agency (Liu, Zang and Xu, 2019). This was also found in the context of GM food (Marques et al. 2015), but not when it comes to nanotechnologies (Cummings, Chuah and Ho 2018).

The model that has been developed to explain the relationship between trust in regulatory institutions and trust in companies and technologies (Figure 1), asserts that public acceptance of a technology is influenced by perceptions of its associated risks and benefits, which are in turn influenced by trust in the institutions charged with regulating and overseeing the use of that technology (Bronfman et al. 2015).

Figure 4: Relation between trust in regulator and trust in the regulated company



Following empirical findings and theoretical logic of contractual trust, this paper hypothesizes that:

H2: *Trust in the regulatory agency increases trust in the regulated company.*

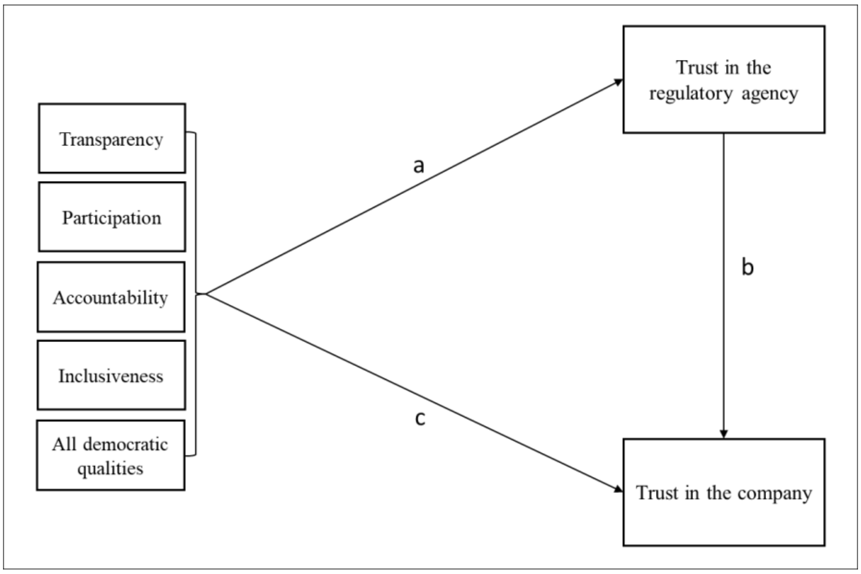
However, this paper aims to further explore the role of trust in the regulatory agency in trust in the regulated company and to learn about the effect of moral-based qualities, and particularly of the democratic qualities of regulatory agencies, in cultivating this trust. Hence, it expands this model and explores the effect of transparency, accountability, participation and inclusiveness on trust in the regulated company as well.

It asserts that democratic qualities of the regulatory agency will increase trust in the company building on a mediating logic, that citizens rely on the moral qualities of the regulator when they assess the risks of a new technology or product. Specifically, when a regulatory agency is perceived as democratic, it is more trusted by people, and accordingly, its regulatory abilities is perceived as more trustworthy – which then leads to more trust in regulated companies. In other words, democratic qualities increase the perceived reliability and effective ability of the regulator to oversee the industry to protect public interest, which reduces the risks associated with technologies. Hence, regulated companies are more trusted when the regulator is more democratic.

H3: *The effect of the democratic qualities of the regulatory agencies on public trust in companies is mediated through higher public trust in the regulator.*

Figure 2 summarizes the theoretical framework and hypotheses.

Figure 5: Relationship between democratic qualities and trust



2. Methodology

2.1. Experimental design

The experiment presents to all respondents a baseline story about a fictional Fintech company offering a new service that offers improved credit and loans, basing on access to one's personal bank account. In the baseline story it was also described how the Privacy authority, which is a regulatory agency that regulates the control of personal data for Fintech companies, has monitored the new app and after confirming compliance it granted it an operating license. It was described according to command-and-control regulatory design, in which the agency issues the regulations, monitors and enforces businesses. In a previous study this regulatory style was found to increase trust in both the regulator and the company (Maman, Feldman and Levi-Faur, under review).

The respondents were then randomly assigned to one of six groups. One group served as the control group and only read the baseline story with no additional information. The second group read an additional text that highlights the transparency of the regulator. The third group read about participation practices that the agency holds. The fourth group read about accountability practices, specifically on periodical reporting to a parliamentary committee. The fifth group read about inclusiveness, emphasizing gender equality and minority inclusion. The final, sixth group, read that the regulatory agency has all four qualities (The full texts are in Appendix 1). The qualities were treated separately to explore whether one of them is more important to citizens. Since previous studies focused on one quality at a time, such comparison was not possible so far.

Whether the respondents perceive the manipulations as intended is crucial for the successful testing of the hypotheses of the study. To ensure that is indeed the case, I pre-tested the manipulations on a separate sample of 184 respondents prior to the full survey. The pre-testing procedure and the development of the manipulations are explained in more detail in Appendix 2. In addition, to ensure that the manipulations were perceived as intended, I introduced a manipulation check towards the end of the survey.

The design and hypotheses of the study were pre-registered in OSF.

2.2. Measures

The goal of the experiment was to investigate the influence of different types of democratic qualities on the trust citizens place in regulators (mediating variable) as well as regulated company (outcome variable). Table 1 includes the items in the questionnaire to measure these variables.

Table 1 – Outcome variables

Trust in Regulator	Trust in company
The Privacy Authority generally performs its tasks in a very competent way	I feel confident to grant the “Superior Information” company access to use my bank account data
The Privacy Authority generally takes the public interest into account	Most of the Israeli public will have the confidence to grant the “Superior Information” company access to use their bank account data
The Privacy Authority generally is acting honestly.	I trust the “Superior Information” company, to not exploit my personal information
	Most of the Israeli public will trust the “Superior Information” company to not exploit their personal information

To measure trust in the regulator, I have built on the widely accepted three-dimensional conceptualization of trust which distinguishes between the dimensions of competence (capturing the perceptions of the ability of the actor to perform its tasks professionally and successfully), benevolence (capturing the perceptions regarding the motivation of the actor to take the public interest into account), and integrity (capturing perceptions regarding the actor’s honesty) (Grimmelikhuijsen & Knies, 2017; Mayer et al., 1995; McEvily & Tortoriello, 2011). To keep the experiment at a manageable length, I used a shortened version of a validated trust scale based on these three dimensions. The three items were measured on a scale from 1 (Completely disagree) to 5 (Completely agree). (Cronbach’s $\alpha = .81$). The sample average was 3.07 and the standard deviation was 0.77.

To measure the dependent variable trust in the company, I used the scale developed by Maman, Feldman and Levi-Faur (under review), which conceptualizes trust in company as the willingness to use its service despite the risks, and includes four items. The items were measured on a scale from 1 (Completely disagree) to 5 (Completely agree). (Cronbach's α = .83). The sample average was 2.41 and the standard deviation was 0.82.

I also measure several additional variables, identified by previous work as moderating variables in the relationship between democratic qualities and trust in the regulator. These include predisposition to trust the government (consisted of three items measuring ABI, Cronbach's α = .82, mean= 2.48, SD=0.85), predisposition to trust firms (consisted of three items measuring ABI, Cronbach's α = .67, mean= 2.89, SD=0.77). Other measures included: democratic efficacy, democratic participation, generalised trust, role of the government in the economy, and knowledge regarding the issue (regulation of data protection) in question (see Appendix 3).

In addition, data for five demographic variables was collected: gender, age group, highest educational attainment, income and working sector. Three of these variables (gender, age and education) were used in the construction of quotas to ensure the representativeness of the sample.

2.3. Randomization

The experiment contains several elements which were randomized between respondents. First, while all respondents were shown the baseline story about the Fintech service, the democratic qualities of the regulator, the treatment, was randomized between subjects. Second, the order of the items measuring trust in the regulatory agency and in the company was randomized. This was done to equally spread a possible ordering bias, in which trust in one actor could affect the measuring of trust in the other actor. In addition, the three items capturing the three components of the trust in the regulator: competence, benevolence, and integrity, were randomized as well.

Finally, the order of the measurement of predisposition to trust the government and the measurement of predisposition to trust firms, as well as the items that construct these variables, were randomized. This was also done regarding the order of the four items of the manipulation checks, both in the full study and in the pre-test.

2.4. Fielding the experiment

The sample size of n= 1986 was determined using G*Power, and assuming a weak effect (basing on the findings in Maman, Feldman and Levi-Faur, under review). Appendix 4 specifies the G*Power procedure and results.

The experiment was conducted on a representative sample of Israeli citizens, using a panel company called “Ipanel” and using the “Qualitrics” survey platform. The survey was active from January 10th 2022 until February 26th 2022. The online survey link was sent to 13594 people, and a total of 6418 have consented to participate in the experiment (a response rate of 47 %). To ensure that the sample will be compositionally similar to the population of Israeli society, the sampling method included setting quotas for the following demographic variables: Gender, age, and education (Tipton et al., 2014). The quotas were calculated based on the most recent publicly available data about the characteristics of the adult population in Israel.

After applying quotas, a total of 5986 respondents completed the survey. Of these, we later filtered out observations due to multiple entries from the same IP address (n=42); and failure at the alert test (n = 3960). For the alert test, an instructional manipulation test was used, similar to previous studies, to detect satisficing. Ultimately, we ended up with a sizable sample of 1984 respondents.

Table 2 outlines the number of participants in each treatment group, table 3 compares the demographic characteristics of the sample and the general population in Israel, and Appendix

5 includes the balance test. The balance test shows that the experimental groups are mostly balanced, which indicates that the randomization was successful. Covariate balance was assessed using cobalt (Greifer, 2022) in R (R Core Team, 2021). I detected an imbalance between the groups with respect to predisposition to trust firms, the government, political efficacy, and knowledge. Therefore, the results are reported with these variables as control variables.

Table 2 – Group sizes

Control	Transparency	Participation	Accountability	Representation	All qualities
N=328	**N=328**	**N=332**	**N=328**	**N=326**	**N=334**
16.5%	16.5%	16.7%	16.5%	16.4%	16.8%

Table 3 - Comparing sample with population

	Sample	*Population (2018)*
% Female	49.4	51.3
Age		
18-29	25.4	21.9
30-39	21.3	20.5
40-49	19.5	18.5
50+	33.9	39.1
Income		
Low	52.7	50
High	41.4	50
Identity		
Jewish	82	82.1
Arab and other	17.9	17.9

Note: the population data was generated by the Israeli Central Bureau of Statistics (CBS).

3. Findings

3.1. Trust in the regulatory agency

Differences in levels of trust in the regulator between the six groups can be detected by examining the means: Control (M=3.01), Transparency (M=3.09), Participation (M=3.03), Accountability (M=3.02), Inclusiveness (M=3.1) and All qualities (M=3.23). Looking at the means, it is visible that all qualities increase trust in the regulator comparing to the control group, whereas the group that read about a regulator with a combination of all four qualities had the highest levels of trust in the regulator. An ANOVA shows that these differences between treatments are significant, i.e. there was a significant overall effect of the democratic quality of the regulator on citizens' trust in the regulator, $F(5,1905)=3.569$, $p<.01$.

Consistently, when running a linear regression to predict trust in the regulator based on the treatment, while controlling for the variables that showed significant in the balance, I find that the positive effect on trust in the regulator was significant only for the group that read about a regulator with all the qualities (Table 4). Reference group for this and all other tables is the control group.

Appendix 8 shows again how individual qualities have relatively small effects, and All qualities had a larger effect. These results confirm the first hypothesis only partially, showing that democratic qualities do increase trust in regulatory agencies, though only when a regulatory agency is described to have all four qualities. Having just one quality does not increase trust in the regulator.

Table 4 – OLS Democratic qualities effect on trust in the regulator

Regression results

	Dependent variable:
	Trust in the regulator
Transparency	0.041
	(0.056)
Participation	0.002
	(0.056)
Accountability	-0.002
	(0.056)
Inclusiveness	0.042
	(0.056)
All qualities	**0.215*****
	(0.056)
Predisposition to trust firms	**0.205*****
	(0.024)

Predisposition to trust the government	**0.238***** **(0.022)**
Political efficacy	**0.049**** **(0.020)**
Knowledge of issue	-0.016 (0.017)
Constant	**1.765***** **(0.084)**
Observations	1,874
R^2	0.174
Adjusted R^2	0.170
Residual Std. Error	0.700 (df = 1864)
F Statistic	43.651*** (df = 9; 1864)
Note:	*p**p***p<0.01

3.2. *Trust in the company*

Differences in levels of trust in the company between the six groups can also be observed: Control (M=2.33), Transparency (M=2.41), Participation (M=2.43), Accountability (M=2.41), Inclusiveness (M=2.49) and All qualities (M=2.44). Levels of trust in the company are generally lower than trust in the regulator and but unlike trust in the regulator, democratic qualities seem to increase more trust in the company. An ANOVA showed that the overall effect of democratic qualities on trust in the company is insignificant, $F(5,1903)=1.376$, $p=.23$. This might signal that there is no direct effect of democratic qualities of the regulator on trust in companies.

A linear regression shows that trust in the regulator is positively correlated with trust in the company.

Table 5– OLS Trust in the regulator effect on trust in the company

Regression results

	Dependent variable:
	Trust in company
Trust in the regulator	**0.417***** **(0.024)**
Predisposition to trust firms	**0.096*****

	(0.026)
Predisposition to trust the government	-0.001
	(0.024)
Political efficacy	**0.051****
	(0.021)
Knowledge of issue	**0.057*****
	(0.018)
Constant	**0.630*****
	(0.092)
Observations	1,874
R^2	0.200
Adjusted R^2	0.198
Residual Std. Error	0.741 (df = 1868)
F Statistic	93.377*** (df = 5; 1868)
Note:	*p**p***p<0.01

When performing a linear regression to predict trust in the company based on the treatment, while controlling for the variables that showed significant in the balance test, I find that 'all qualities' have a positive significant impact on trust in the company (Table 6). The effect was also positive for the group that read about a regulator with the quality of inclusiveness, which was not significant for trust in the regulator. This suggests that inclusiveness could have a direct effect on trust in the regulated company, independently from trust in the regulator.

Table 6– OLS Democratic qualities effect on trust in the company

Regression results

	Dependent variable:
	Trust in company
Transparency	0.069
	(0.064)
Participation	0.088
	(0.064)
Accountability	0.082
	(0.064)
Inclusiveness	**0.128****
	(0.064)
All qualities	**0.116***
	(0.064)
Predisposition to trust firms	**0.179*****
	(0.028)

Predisposition to trust the government	**0.098***** **(0.025)**
Political efficacy	**0.072***** **(0.023)**
Knowledge of issue	**0.050**** **(0.020)**
Constant	**1.314***** **(0.096)**
Observations	1,874
R^2	0.077
Adjusted R^2	0.073
Residual Std. Error	0.797 (df = 1864)
F Statistic	17.321*** (df = 9; 1864)
Note:	*p**p***p<0.01

3.3. The mediating role of trust in the regulator

Table 7 shows that when the effect of democratic qualities on trust in the company is tested, controlling for trust in the regulator, then the effect of 'all qualities' is no longer significant. This result suggests that trust in the regulator could be a mediating variable for the effect of the condition of all democratic qualities on trust in the company. Table 7 also shows that the effect of inclusiveness on trust in the company remains significant even when controlling for trust in the regulator, which undermines the mediation hypothesis for this condition.

Table 7 - Democratic qualities effect on trust in the company controlling for trust in the regulator

Regression results

	Dependent variable:
	Trust in company
Transparency	0.052 (0.059)
Participation	0.087 (0.059)
Accountability	0.083 (0.059)
Inclusiveness	**0.111*** **(0.059)**
All qualities	0.026 (0.060)
Trust in the regulator	**0.419***** **(0.025)**

Predisposition to trust firms	**0.093***** **(0.026)**
Predisposition to trust the government	-0.002 (0.024)
Political efficacy	**0.051**** **(0.021)**
Knowledge of issue	**0.057***** **(0.018)**
Constant	**0.574***** **(0.099)**
Observations	1,874
R^2	0.202
Adjusted R^2	0.198
Residual Std. Error	0.741 (df = 1863)
F Statistic	47.179*** (df = 10; 1863)
Note:	*p**p***p<0.01

In order to further test the mediation model, a path analysis was carried out using the *Lavaan* package (lavaan 2012). First, the fit of the model was tested using CFA. The model ($\chi2$ = 365.409, df = 41, p = 0.000). Fit is found to be good, with CFI = 0.947, TLI = 0.929, RSMEA = 0.063, and SRMR = 0.033)[2].

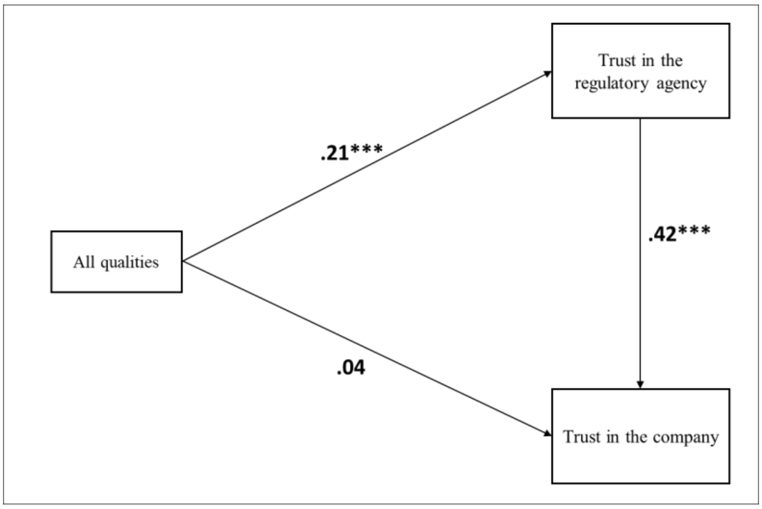
Since the independent variable is a multi-categorical variable with 6 categories. Dummy variables were created for them. Then, an SEM was performed only for the categories that had a significant effect on trust in the company in the OLS (Table 6) inclusiveness and 'all qualities'.

Parameter estimates showed that the effect of 'all democratic qualities' on trust in the company was fully mediated via trust in the regulatory agency. As Figure 3 illustrates, the regression coefficient between the 'all democratic qualities' and trust in the company was insignificant and the regression coefficient between trust in the regulatory agency and on trust in the

[2] CFI = close fit, TLI= acceptable fit, RMSEA = acceptable fit, SRMR=close fit

company was significant. Standardized coefficients are reported to facilitate comparison of the relative effect of each predictor.

Figure 6: Model a – all qualities-trust in regulator-trust in company

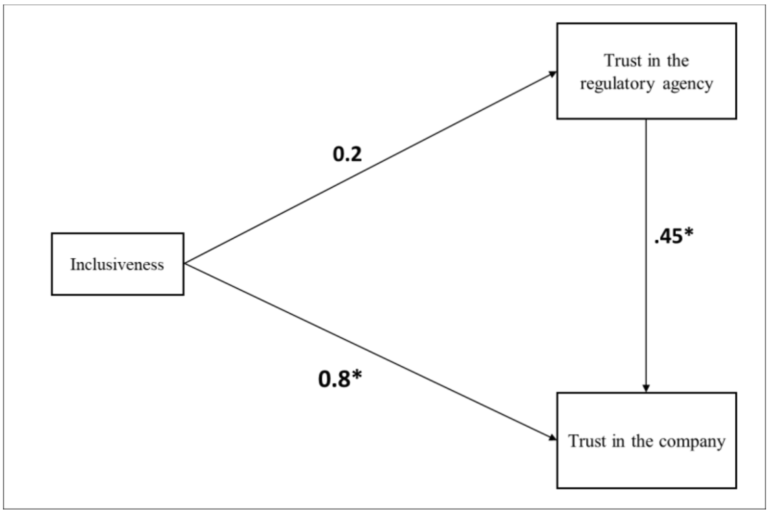


The indirect effect of the condition 'all qualities' on trust in the company is (.21)*(.42) = .08.

I tested the significance of this indirect effect using bootstrapping procedures. Unstandardized indirect effects were computed for each of 1'000 bootstrapped samples, and the 95% confidence interval was computed by determining the indirect effects at the 2.5th and 97.5th percentiles. The bootstrapped unstandardized indirect effect was .084, and the indirect effect was statistically significant ($p<.001$).

For inclusiveness, parameter estimates confirmed that the effect of inclusiveness on trust in the company is not mediated via trust in the regulatory agency. As Figure 4 illustrates, the regression coefficient between inclusiveness and trust in the company and the regression coefficient between trust in the regulatory agency and on trust in the company were both significant. However, the effect of inclusiveness on trust in regulatory agency is insignificant, hence ruling out a mediation path.

Figure 7: Model b – inclusiveness-trust in regulator-trust in company



3.4. Hypotheses testing

The findings of this study confirm Hypothesis 1, showing that democratic qualities do increase trust in the regulatory agency. The ANOVA confirms that differences in level of trust in the regulator were significant after the manipulation. The OLS specified that only when the regulator has *several qualities* a significant positive effect can be determined. This implies that democratic qualities are important for trusting regulatory agencies, but that if regulatory agencies want to enjoy higher public trust, they should increase transparency, accountability, participation, and inclusiveness altogether. Emphasising just one is not enough for increasing public trust.

The findings also confirm H2, showing that trust in the regulator is positively correlated with trust in the regulated company. This supports previous studies' conclusions that citizens rely on regulatory agencies in the decision to trust firms and new and risky new technologies (Sønderskov & Dinesen 2016).

Finally, the SEM confirmed H3 showing that the effect of 'all democratic qualities' on trust in the company was fully mediated via trust in the regulatory agency. The findings were not conclusive regarding the direct effect of democratic qualities and trust in the company

(ANOVA showed insignificant, OLS showed that both ‘all qualities and inclusiveness have a positive significant effect). Yet, significance in direct path is not obligatory to establish mediation (Hayes 2017). Nonetheless, a direct significant effect of two conditions was detected (all qualities and inclusiveness).

Discussion and Conclusion

This paper aimed to explore whether democratic qualities of regulatory agencies increase public trust in regulatory agencies and whether this trust also extends to regulated businesses. The hypotheses were mostly confirmed, however a positive significant effect for trust in the regulator was found only when a regulator has all qualities and for trust in the business it was found also when the regulator is inclusive. Meaning that transparency, accountability, and participation do not increase trust in regulators nor in companies. This result is surprising. It also contradicts previous studies that found that these qualities do increase trust in the public organizations. This could a result that is only relevant for the Fintech industry, and that the positive effects of democratic qualities are present in certain regulatory sectors and countries more than others (Grimmelikhuijsen et al. 2021; Grimmelikhuijsen, Porumbesco, Hong and Im 2013). Or it could imply that in regulatory contexts, democratic qualities only increase trust in regulatory organizations when they have a combination, or a high level of these qualities.

The findings of this study confirm that trust in the regulatory agency acts as a mediator between democratic qualities and trust in the regulated business. This confirms that citizens rely on regulatory agencies’ democratic qualities in their operational decision to trust and use new technologies and the idea of the regulator as a ‘third party provider’ (Six and Verhoest 2017). This corroborates findings from our previous study which tested the same regulatory context and country (Maman, Feldman & Levi-Faur, under review).

Interestingly – a direct effect of inclusiveness on trust in the business has been determined. This means that reading about an inclusive regulator increases trust in the company without increasing trust in the regulator. The theory suggests that organizations gain trust when they are viewed by the public as fair, and that people care about procedural fairness (Sunshine & Tyler 2003). The relationship between justice and trust includes the idea that fair outcomes, procedural, and interpersonal treatment involve the trustworthiness of the engaged parties (Chen & Chou 2012). Hence, the results of this study contradict this theory – they show that inclusiveness do not increase the trust toward the regulator. A possible explanation could be that inclusiveness, as a procedural fairness element, does not impact trust but rather a different outcome such as acceptance or satisfaction (not measured in this study). Previous studies found that procedural fairness leads people to accept political and enforcement decisions, even if it is against their own interest (Bøggild & Petersen 2016). In this line of thought, perhaps people accept or are satisfied with inclusive regulators and this in turn increases their willingness to use regulated products. This should be further explored.

Another explanation to this finding might be the 'Optimistic Trust Effect', where inclusiveness could have led respondents to have positive beliefs about a just world, which masks the potential risks in the app and makes them feel more optimistic and confident leading them to more trust in the app (Wilson & Darke 2012). Future studies can shed light on this puzzle by introducing both existence and lack of democratic qualities to control for this effect.

This study has other limitations. It focused on one country (Israel) and one regulatory sector (Fintech and data protection). Hence, the ability to generalize these findings to other societies with possible different value prioritization, or to other sectors, is limited. Only future studies that will replicate the study to other contexts can assure us that the findings are universal for all regulatory contexts. Second, the study did not test the moderating role of some of the covariates, and neither tested whether the independent variables have a differentiated effect on the different dimensions of trust (ABI). This is planned to be done in a next paper.

Finally, this paper ignores the potential effect of performance and capacity of the regulatory agency and the business and the enforcement style and reputation of the regulator which are central qualities that can impact trust (Seyd 2015). Nonetheless, the focus on democratic qualities, and especially the comparison between the qualities enables us to understand preferences in terms of qualities that have so far been studied separately.

The paper contributes to the literature by confirming that (at least in the context of data-protection and Fintech) the move toward responsiveness and increase in democratic qualities in regulatory agencies, are not only are important normatively, but they also have a positive impact on enabling and encouraging economic growth by increasing trust in emerging technologies. While some scholars question whether becoming more responsive to various stakeholder increases legitimacy or undermines the legitimacy of regulatory agencies, which was for many years based on their independence and expertise (Koop & Lodge 2020), this study findings show that becoming more democratic, and sharing more power to the public, especially if various qualities are included and not just one, has positive impact on trust and on the optimization of the economy and market.

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APPENDICES

Appendix 1 – Vignettes

Baseline story	In Israel, new FinTech companies have recently begun offering financial services in the area of loans and mortgages. A new company called "Better information" offers a service to improve loan terms and reduce the cost of loans and fees. However, in order to use this service, you must give the company access to your personal information on your personal bank account. The Better information application has received license from the Ministry of Justice's Privacy Authority, whose role is to issue regulations and monitor fintech companies to ensure that consumers' personal information is not misused.

Group 1 – Control	No additional text beyond the baseline story.
Group 2 – Transparency	The Agency proactively publishes an explanation and reasoning to the public for each new regulation and a decision concerning the enforcement of existing regulations. The agency also publishes how it makes decisions and who takes part in the decision-making.
Group 3 – Participation	The agency conducts consultation procedures with the general public and civic groups regarding the enactment of new regulations and the enforcement of existing regulations.
Group 4 – Accountability	The head of the agency appears before the Knesset's Economics Committee every six months, in order to report on the decisions made and justify them.
Group 5 – Inclusiveness	The agency employs people from all groups of Israeli society, including people with disabilities, the Arab population, and Ethiopians. The authority also maintains an equal number of women and men.
Group 6 – All qualities	The Agency proactively publishes an explanation and reasoning to the public for each new regulation and a decision concerning the enforcement of existing regulations. The agency also publishes how it makes decisions and who takes part in the decision-making. The agency conducts consultation procedures with the general public and civic groups regarding the enactment of new regulations and the enforcement of existing regulations. The head of the agency appears before the Knesset's Economics Committee every six months, in order to report on the decisions made and justify them. The agency employs people from all groups of Israeli society, including people with disabilities, the Arab population, and Ethiopians. The authority also maintains an equal number of women and men.

Appendix 2 – Pre-test protocol

As a first step, two descriptions were developed for each democratic quality (table 4). To select one vignette per quality out of the developed two, a small-scale survey was launched. 184 citizens were surveyed between 8th and 22nd of December 2021. They were sampled through an online panel company which sent the link to the respondents. Quotas were included in the sampling to assure representativeness. 217 respondents completed the survey, 2 were from the same IP so they were removed. The number of participants that failed the alert is 31. The total number of respondents in the final sample is 184.

	Transparency	**Participation**	**Accountability**	**Inclusiveness**
Option 1	The Agency proactively publishes an explanation and reasoning to the public for each new regulation and a decision concerning the enforcement of existing regulations. The agency also publishes how it makes decisions and who takes part in the decision-making.	Adjacent to the agency is an advisory committee, which consists of representatives of the public, civil society and financial technology companies, which accompanies the agency's activities and decisions. The agency consults with the Committee regarding new regulations and enforcement of regulations.	The head of the agency appears before the Knesset's Economics Committee, once every six months, in order to report on the decisions made and justify them to the Knesset members.	The agency operates in accordance with a policy of diversity in employment, which ensures that its employees have adequate representation for members of both sexes, people with disabilities, the Arab population and Ethiopians.
Option 2	For each new regulation and decision, the agency publishes on its website an explanation to the general public and also adds a justification. The agency also publishes	The agency conducts consultation procedures with the general public, civic groups, interest groups and financial technology companies. In these proceedings, the	The agency is required to visit the Knesset once every six months, in order to appear before the Economics Committee, to report on and justify the decisions made.	The agency employs people from all groups of Israeli society, especially people with disabilities, the Arab population, and Ethiopians. The authority also maintains an equal

information on the website on the decision-making process, detailing the actors that took part in it.	agency consults regarding the enactment of new regulations and the enforcement of existing regulations.		number of women and men.

The participants were asked four questions about one of the vignettes which they were assigned to randomly, to which they could respond on a 5-point scale from 1 – Strongly disagree to 5 – Strongly agree. The four questions are presented in Table 5. The aim was to identify the vignettes that led to higher levels of agreement in the related quality.

Table 8: Items examining perception of vignettes (order randomized)

1. The agency acts transparently and discloses information to the public.
2. The agency considers the opinions of the public when making decisions.
3. The parliament oversees the work of the agency.
4. The agency employees represent different social groups in the Israeli society.

The order in which the questions were asked was randomized.

The average scores on the first measure were:

	Transparency	Participation	Accountability	Representation
Option 1	4.05	2.11	3.6	4.04
Option 2	3.52	4.07	3.87	4.86

The average scores on the second measure were:

	Transparency	Participation	Accountability	Representation
Option 1	4.4	3.9	4	4.5
Option 2	4.36	4.06	3.9	4.35

Appendix 3 – Additional measures

Covariate	**Question**
Pre-disposition to trust the government	On a scale from 1 to 5, how much do you agree with the following: Public organizations…. generally, perform their tasks in a very competent way generally, take the public interest into account generally, act honestly.
Pre-disposition to trust firms	On a scale from 1 to 5, how much do you agree with the following: Firms…. generally, perform their tasks in a very competent way generally, take the public interest into account generally, act honestly.
Democratic efficacy	On a scale from 1 to 5, how much do you agree with the following: I am confident in my ability to affect government policy The political system in Israel enables people like me to influence what the government does
Democratic participation	(From ESS) There are different ways of trying to improve things in Israel or help prevent things from going wrong. During the last 12 months, have you done any of the following? taken part in a public demonstration? Participated in a home event where a politician was invited Signed a petition? posted or shared anything about politics online, for example on blogs, via email or on social media such as Facebook or Twitter? Participated in an event of the party you support? Tried to convince a family member or a friend on a political issue contacted a politician, government or local government official? Donated money to a political party Donated money to a citizen group Participated in a political discussion on the internet or by writing a letter to a newspaper worked in a non-profit organisation or association? worked in a political party or action group? None of the above Refuse to answer
Generalised trust	(From TiGRE and others) In general, how much do you trust most people? Please answer on a scale from ‘0’ to ‘10’, where ‘0’ is do not trust at all and ‘10’ is trust completely.
Role of the government in the economy	(From TiGRE) Think about the economy in general. How strictly should government regulate business to protect the people? Please answer on a scale from ‘0’ to ‘10’, where ‘0’ is "not strictly at all" and ‘10’ is "very strictly"
Knowledge regarding the issue	On a scale from 1 to 5, how much do you agree with the following:

	- I am very familiar with the existing regulation on personal data protection in Israel. - I constantly follow media articles about regulation of financial technologies.

Pre-disposition to trust the government and firms, was developed based on the widely accepted three-dimensional conceptualization of trust, using the shortened version (Grimmelikhuijsen & Knies, 2017). Democratic efficacy was developed as an alteration to the ESS measure, which is focused on political efficacy. This measure focuses on the perceived ability to take part and influence public policy and governmental work. Democratic participation was adapted from the ESS survey, adding to it some more items.

Generalised trust has been often linked to trust in institutions, particularly those that are perceived as effective and impartial (Rothstein & Stolle, 2008; Sønderskov & Dinesen, 2016). For that reason, I introduce generalised trust as a covariate in the study. To measure it, I employed the item used in the TiGRE study, which is a slight adaptation of the item used in the European Social Survey (Aleksovska and Grimmelikhuijsen, 2021). The question regarding the role of government in the economy was again introduced in the TiGRE project, which was in turn inspired by Flecker et al. (2009). Political participation: Although differencing between modes of participation is the most established way to approach political participation since the seminal work by Verba and Nie (1972), I followed Persson and Solevid (2014) and constructed an additive index that simply is the sum of the number of forms of participation performed.

Appendix 4 - Sample size estimation

G*Power result Wednesday, November 24, 2021 -- 15:59:11 F tests - ANOVA: Fixed effects, omnibus, one-way Analysis: A priori: Compute required sample size Input: Effect size f = 0.10

	α err prob	=	0.05
	Power (1-β err prob)	=	0.95
	Number of groups	=	6
Output:	Noncentrality parameter λ	=	19.8600000
	Critical F	=	2.2186166
	Numerator df	=	5
	Denominator df	=	1980
	Total sample size	=	1986
	Actual power	=	0.9502649

Appendix 5 – Balance table

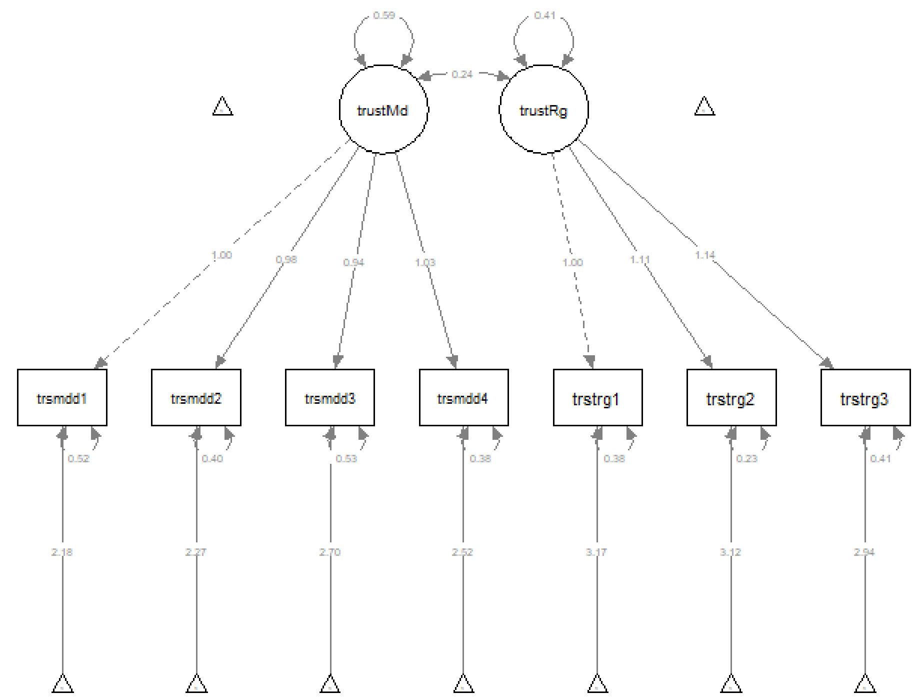
	Control N=328	Transparency N=328	Participation N=332	Accountability N=328	Representation N=326	All qualities N=334	p.overall	N
Gender:							0.485	1976
Male	45.1%	47.0%	46.1%	49.4%	51.5%	50.6%		
Female	54.9%	52.7%	53.9%	50.6%	48.5%	49.4%		
Other	0.00%	0.30%	0.00%	0.00%	0.00%	0.00%		
Age:							0.448	1976
18-29	29.9%	25.9%	24.7%	26.2%	26.4%	25.4%		
30-39	21.3%	18.9%	24.4%	28.4%	23.0%	21.3%		
40-49	18.9%	18.6%	18.1%	18.6%	18.1%	19.5%		
50-59	17.4%	20.1%	19.3%	14.3%	18.7%	18.6%		
60-60	11.3%	14.6%	12.7%	10.7%	11.3%	13.8%		
70-79	0.91%	1.83%	0.30%	1.83%	2.45%	1.50%		
80+	0.30%	0.00%	0.60%	0.00%	0.00%	0.00%		
Income level:							0.994	1976
Way below average	30.8%	28.4%	30.4%	29.6%	31.9%	30.5%		
below average	23.8%	26.8%	22.6%	25.0%	21.5%	22.2%		
average	16.2%	16.8%	17.8%	18.6%	16.9%	19.8%		
above average	15.9%	15.2%	16.0%	15.9%	17.2%	17.1%		
way above average	6.40%	6.10%	6.63%	4.57%	4.29%	4.49%		
Irrelavant/Refuse	7.01%	6.71%	6.63%	6.40%	8.28%	5.99%		
Identity/Ethnicity:							0.232	1976
Jewish	84.8%	81.4%	82.2%	81.7%	84.0%	82.0%		
Arab	2.44%	5.18%	4.52%	3.96%	2.45%	5.99%		
Druze	1.22%	3.05%	1.51%	1.52%	0.61%	0.60%		
Muslim	8.84%	6.10%	8.13%	7.32%	8.59%	6.89%		
Chrisitian_Arab	1.52%	1.22%	1.20%	1.83%	2.76%	1.50%		
Christian	0.30%	0.30%	0.30%	0.91%	0.31%	0.90%		
No_Religion	0.91%	2.44%	1.20%	1.52%	0.61%	2.10%		
Other	0.00%	0.30%	0.90%	1.22%	0.61%	0.00%		
Predisposition to trust firms	2.88 (0.70)	2.91 (0.72)	2.95 (0.70)	2.87 (0.73)	2.96 (0.78)	2.82 (0.76)	0.119	1976
Predisposition to trust the Gov	2.46 (0.82)	2.55 (0.89)	2.48 (0.83)	2.48 (0.91)	2.52 (0.86)	2.40 (0.83)	0.286	1976

Trust in people	4.86 (2.59)	4.97 (2.60)	4.92 (2.67)	4.83 (2.57)	4.85 (2.57)	5.00 (2.51)	0.953	1868
Economy intervention	7.72 (2.26)	7.68 (2.32)	7.82 (2.27)	7.80 (2.21)	7.44 (2.39)	7.65 (2.21)	0.342	1863
Political Efficacy	2.26 (0.87)	2.14 (0.90)	2.25 (0.85)	2.22 (0.89)	2.28 (0.94)	2.19 (0.89)	0.336	1976
knowledge	2.01 (0.93)	2.10 (0.99)	2.06 (0.96)	2.00 (0.94)	2.06 (0.97)	2.00 (1.00)	0.717	1874

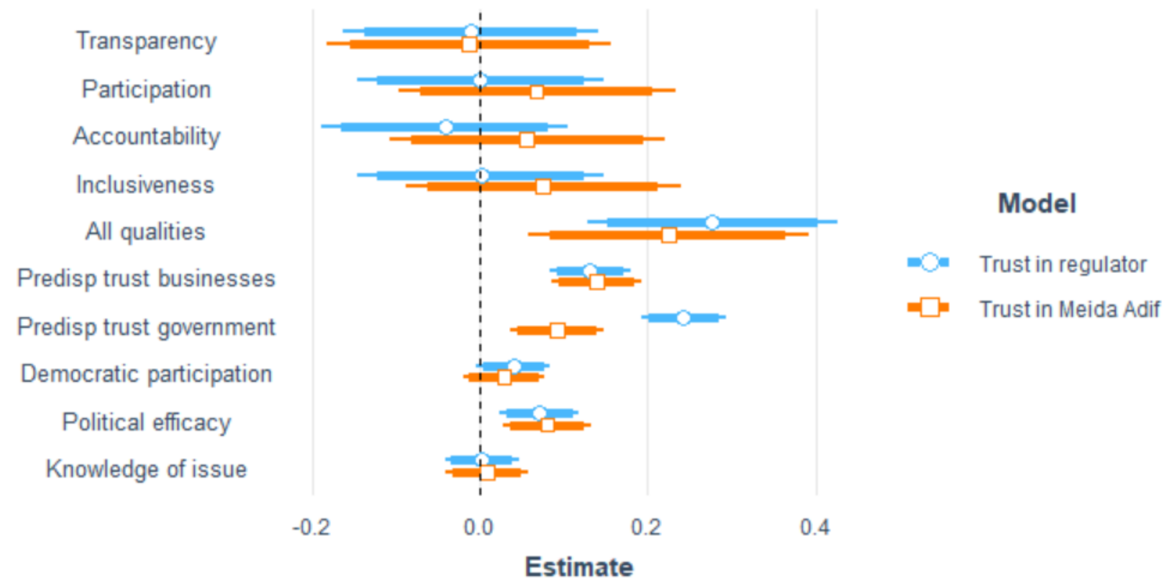
Appendix 6- Correlation matrix

Measure	1	2	3	4	5	6	7	8
1. Trust in the company	1							
2. Trust in the regulator	0.425***	1						
3. Predisposition to trust firms	0.223***	0.309***	1					
4. Predisposition to trust the government	0.200***	0.358***	0.411***	1				
5. Political efficacy	0.164***	0.189***	0.216***	0.370***	1			
6. Knowledge of issue	0.104***	0.046*	0.083***	0.143***	0.228***	1		
7. Trust in people	0.267***	0.225***	0.200***	0.230***	0.145***	0.160***	1	
8. Economic intervention	-0.087***	-0.001	-0.085***	0.017	-0.025	0.029	-0.056*	1

Appendix 7 – CFA



Appendix 8 – Plotting the estimates



Paper #3

Varieties of Regulatory Regimes and their Effect on Public Trust in Market Actors

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Status: Under review - R&R

Varieties of Regulatory Regimes and their Effect on Public Trust in Market Actors

Abstract:

It is widely argued that command-and-control regulation is a burdensome, inefficient, and illiberal form of governance. In recent decades, many efforts have been made to find alternatives that could protect and enhance public interest in a less costly, less legalistic, less punitive, and less paternalistic manner. These alternatives include various instruments under the umbrella of smart and self-regulatory regimes. However, it is still unclear how such alternatives affect citizens' trust in regulated market actors. Using two experimental surveys (n=1195), we examine the extent to which nine different regulatory designs affect citizens' willingness to trust a hypothetical Fintech company. The results show that citizens' trust increases with the existence of a state regulator and decreases with self-regulatory regimes and deregulation. We also find an increase in trust when the state regulator relies on pledges rather than strict oversight, provided that the regulator is perceived as trustworthy. These results suggest that governmental command-and-control regulation may be more beneficial to both the public and firms than is often assumed, as more government regulation may mean more trust in the market.

Introduction

Regulation and trust are central concepts when it comes to the legitimacy and effectiveness of democratic governance. Yet they are rarely examined together as alternative or complementary mechanisms of governance. This paper proposes a different path for theoretical progress, one that considers variations in the design of regulation and closely links trust in markets to trust in government. Particularly, we ask how different regulatory designs, including traditional command-and-control state regulation, and various self-regulation regimes, affect citizens' willingness to place themselves in a vulnerable position and trust a Fintech company to access their financial data, a situation that is highly relevant in the platform economy as well as in the context of growing privacy and fraud challenges.

We conducted two experimental surveys on representative samples of the Israeli population (Study 1: N=597; Study 2: N =598). Respondents were presented with a hypothetical new Fintech company that offers credit services but requires access to personal financial data. By assessing the level of trust in the regulated firm that different regulatory designs elicit from respondents, and by examining the role of trust in the regulator in this dynamic, we provide for the first time a study that goes beyond assessing trust in a bilateral relation.

Our findings show that trust in market entities is highly dependent on the existence of state regulation, where traditional command-and-control leads to a higher degree of trust in market entities compared to state regulation based on pledges, and to all forms of self-regulation, thin or enhanced. However, we find a significant interaction effect of trust in the regulator for state regulation that relies on pledges, implying that when the public trusts the regulator itself, state regulators can use self-regulatory tools and still maintain a high level of public trust in market actors.

The results of this study open the way for a different theoretical perspective on the growth of regulation and the relationships between regulation and markets. From this perspective, government regulation enhances trust in markets and thus an overlapping interest of businesses and the public in the need for regulation can explain the continued growth, some would say explosion, of state-based regulation in neoliberal countries. In addition, the findings imply that if states wish to accommodate businesses wishes and relax regulatory burdens, by moving towards newer and less punitive regulatory approaches, states first need to gain trust of the public.

The remainder of the paper is organized as follows. Part 1 introduces the theoretical framework discussing regulatory designs and linking trust and regulation. Part 2 describes the methodology and experimental design of the two studies. Part 3 presents and discusses the results. Part 4 concludes with the theoretical implications.

1. Theoretical Framework: Trust and Regulation

It is widely argued that state regulation, particularly command-and-control (C&C) regulation, is burdensome, inefficient, susceptible to capture, and ineffective at governing market actors. Nonetheless, state regulation is widespread and even expanding (Coglianese, Sarin & Shapiro, 2021; Jordana, Levi-Faur & Fernandez-i-Marín, 2011; Levi-Faur, 2005, 2011). This is despite at least four decades of resistance to government regulation by business, political, and ideological actors, as well as the so-called deregulation and better regulation reforms. For many, regulation is merely a tool to correct market failures, not an instrument to promote capitalist exchange. Although some have showed preference for mandatory rules (Katz and Zamir 2021), it is usually assumed that wherever possible, market self-regulation is preferred over state intervention (Tikotsky, Pe'er & Feldman, 2020). When markets work, the conventional wisdom goes, it is best to leave them as they are (Sinclair et al., 1997).

The benefits of regulation are understood only to a very limited extent and strategies for building trust through regulation are often ignored in the literature. Nonetheless, trust is an important element in the functioning of both markets and regulation. Trust is not only an outcome of good governance, but also a critical determinant of the good functioning of the economy. The relationships between trust and regulation should therefore be the focus of our attention (Six & Verhoest, 2017).

We therefore examine, for the first time to our knowledge, the relationships between different regulatory designs that rely to some extent on trust and the choices of market actors. Our analysis relies on a new way of conceptualizing self-regulation and an emphasis on the role of intermediaries in these regimes. Intermediaries certify, report, verify, monitor, evaluate, flag, whistle blow, and audit regulatory interactions. As rule intermediaries between regulators (rule makers) and regulatees (rule-takers), they can have significant negative and positive impacts. At best, they strengthen trust between actors. At worst, they undermine or subvert the rules. In self-regulatory regimes they serve to monitor the rules, integrity, and compliance of the self-regulatory firm, association, and regulation. In this way, they may (or may not) serve as facilitators of trust (Abbott et al., 2017).

1.1 Trust and Market Actors

Trust has been studied in various academic disciplines and, accordingly, there are numerous definitions that emphasize different phases of the trust process (Oomsels, 2016). These processes consist of (1) the assessment of trustworthiness, (2) the actual decision to trust, and (3) trust-based actions (Dietz, 2011). However, trust could also be defined as encompassing all phases. One of the most used conceptualizations of trust sees trust as 'a psychological state comprising the intention to accept vulnerability based upon the positive expectations of the intentions or behavior of another'(Rousseau et al., 1998, 395). Mayers et al. (1995) also define trust in this broad manner and distinguishes between three dimensions of assessing trustworthiness: perceptions of an organization's Ability, Benevolence, and Integrity. While trustworthiness is an important and significant determinant of trust, it is not synonymous with trust (Gillespie, 2012). Therefore, when assessing trust in market entities, we propose to also focus on the second and third phases of the trust process, i.e., the behavioral manifestation of trust. We define trust in market entities as *the extent to which an individual perceives a market entity as trustworthy and is willing to be vulnerable and engage with it.*

Several influential scholars have seen trust as necessary for economic prosperity (Fukuyama, 1995). Robert Putnam has embedded this idea in his definition of social capital which includes 'features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions' (Putnam, 1993, 167). The importance of trust for economic growth might be explained by the fact that trust facilitates economic transactions by reducing transaction costs (Whiteley, 2000). For example, trust will determine if we feel confident enough to consume food prepared by others or get vaccinated with a newly developed vaccine.

Trust is especially important for transactions that involve an element of time, such as financial transactions, since in these type of transactions consumers are even in a riskier position. Empirical evidence corroborates this and shows that lack of trust discourages people from purchasing insurance if they do not believe the company will stand up for its promise to pay when due and perception of risk and lack of trust leads to reduced stock market participation (Guiso, Sapienza & Zingales, 2009; Guiso, 2012).

However, does this theoretical assertion hold true in reality? Does the existence of regulation reduce transaction costs and increase the willingness of citizens to engage in economic transactions? While macroeconomic studies have found conflicting results regarding the direction of regulation's effect on economic growth (Dawson & Seater, 2013; Jalilian, Kirkpatrick, & Parker, 2007; Zak & Knack, 2001), almost no behavioral science scholars have attempted to answer these questions. As a result, empirical data on the relationship between trust in market actors and regulation from the perspective of public perception and behavior are particularly limited.

1.2 Varieties of Regulatory Regimes

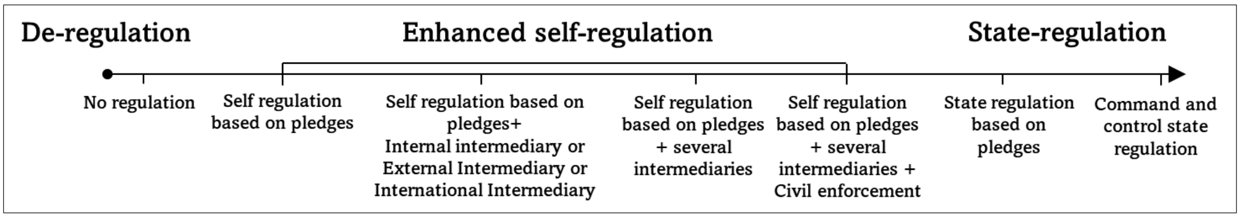
Regulation is governance through rule-making, rule-monitoring, and rule-enforcement. Regulations are often formal but can also be informal and normative. In a narrow sense, they include only secondary and tertiary legislation, but more broadly they often include primary law, codes of conduct, and even conventions (Levi-Faur, 2011). The state is widely, though not uniformly, seen as the central regulator, holding the role of command-and-control. Increasingly, however, regulatory regimes, even state-centered ones, are understood to be hybrid and layered. Hybrid in the sense that they include different forms of regulation and actors and layered in the sense that they include different types of mechanisms layered on top of each other to add credibility. Some of the actors and mechanisms serve to restore, compensate for, or enhance trust in market entities and to enable economic participation by imposing constraints and oversight on firms and companies.

Much of the existing regulation was developed after a trust crisis occurred, when the government intervened to restore trust and ensure market vitality. Möllering (2006) discussed the role of contracts and institutional regulators in influencing the decision to trust others. He emphasized that these tools will never be sufficient to address all vulnerabilities, and that it will always be necessary for trust-givers to make a leap of faith. However, this is more likely to occur when the risks and vulnerabilities appear low enough due to the protection that regulation provides to the public (Six & Verhoest, 2017).

Regulatory regimes are often conceptualized on the spectrum between command and control and self-regulation. At one extreme, responsibility for setting rules, monitoring, and disciplining misconduct lies with the state; at the other extreme, responsibility is delegated to the market itself. In purely self-regulatory regimes, the market actor regulates itself. In this role identity, the same person or organization assumes both the role of the regulator and the role of the regulated. Self-regulatory regimes may also include a third actor - an intermediary. In some cases, the intermediary may also be part of this unified regime in which one actor holds all three roles. For example, police might regulate their officers through an internal disciplinary body. Or another example: for certain products, safety certification is accredited by the manufacturing or marketing entities themselves. In reality, however, regulatory regimes may be a combination of state based and self-regulation. Thus, most self-regulatory regimes are hybrid rather than pure (Sinclair, 1997; Medzini, 2021a, 2021b). Often, this hybridity is designed to enhance the credibility of the regime. However, the literature has not yet addressed how different varieties of regulatory regimes affect public trust in market actors. Our study is the first to do so.

We identify nine different regulatory regimes (Figure 1). These regimes are neither exhaustive nor representative of all regulatory regimes, but we believe that they are useful for exploring the differences in terms of trust and reflect the most known designs.

Figure 8: The Continuum of Regulatory Regimes



The first regime identified is of no regulation regime (de-regulation), in which there is no governmental nor private regulation of the activity of companies regarding a certain public value.

The second regime we identified is rather on the exact other side of the continuum, the classical command-and-control state regulation, where a governmental regulatory agency grants licenses to companies after examining them and finding that they adhere to the regulations. In this regime, the state regulator continues to oversee the activity of companies and can sanction them in case of rule-violation.

The third regime is a state regulation regime that relies on pledges. That is, an existing governmental regulatory agency which grants licenses to companies that pledge that they comply with the regulations and does not monitor the activity of companies after a license has been granted (Pe'er & Feldman, 2021). This design is increasingly implemented in different regimes, and evidence shows that it receives very high support from managers (Tikotsky, Pe'er, & Feldman, 2020).

The next designs all fall under the concept of self-regulation, in which there is no state regulation at all, but market entities can pledge to follow basic (internal or external) rules. The fourth regime we identify is a very thin self-regulatory regime that includes only one instrument: pledging to comply with internal or external (non-governmental) rules.

We then identify three designs that include both a pledge and an intermediary: (1) an internal intermediary, in which companies hire an attorney to monitor that the company is complying with self-regulations; (2) an external intermediary, in which companies not only pledge but also have an NGO certificate confirming that the company is complying; and (3) an international intermediary, in which companies are audited by an international certification organization and receive accreditation.

Next, a layered design is presented in which the self-regulatory regime includes several self-regulatory instruments by combining all four instruments: pledges, internal, external and international intermediaries.

Finally, an enforcement enhanced self-regulatory regime. In this extended self-regulatory regime, companies can be regulated by all four self-regulatory instruments, and in addition, there is the possibility of civil enforcement. That is, if the company violates the rules to which it has committed, the NGO's license and international accreditation are canceled.

1.3. Research Hypotheses

The regulatory regimes we have outlined represent means of restoring, compensating for, or enhancing trust in market entities. However, evidence on whether and how they accomplish this goal is lacking.

Since the main reason for distrust of the market is related to the perception that they prioritize their own profits at the expense of consumer welfare, any regulatory regime in which the source of regulation is perceived to be driven by other forces and aims to protect the public interest will benefit more than regulation that favors the interests of market actors (Balliet & Van Lange, 2013). We also draw on the study by Grimmelikhuijsen et al. (2021), which found that citizens expect a punitive and monitoring regulation and therefore their willingness to trust market entities is lower under self-regulatory regimes that are characterized or perceived as less punitive than the state. We can hypothesize that this distrust in the ability of market actors to self-regulate could be emulated if external factors, not controlled by the market actors themselves, are part of the self-regulatory mechanisms.

Therefore, we develop hypotheses that reflect a hierarchy in trust-inspiring designs, with government regulation higher than self-regulation, C&C higher than hybrid design, and multilayered self-regulation higher than thin self-regulation:

- **H1a:** *Trust in firms will be higher in state regulatory regimes than in self-regulation regimes.*

- **H1b:** *Trust in firms will be higher in state regulatory regimes where the state regulator monitors the firms (C&C), than in state regulation regimes where the regulator reduces monitoring levels and relies on pledges.*
- **H2a:** *Trust in firms will be higher in enhanced self-regulatory regimes that includes an intermediary rather than thin self-regulatory regimes that bases only on pledges.*
- **H2b:** *Trust in firms will be higher in enhanced self-regulatory regimes that includes several intermediaries rather than enhanced self-regulatory regimes that include only one kind of intermediary.*

From a rational choice perspective, knowing that regulators not only prescribe how market actors should act, but also how much they should pay for their misbehavior, increases the incentive of market actors not to harm consumers and in the public's perspective, increases trust in them (Mulder, Verboon & De Cremer, 2009). Therefore, we can hypothesize that trust in market entities is increased if people know that the regulator has the power to sanction the market actor. This hypothesis is also based on the study by Grimmelikhuijsen et al. (2021), who found that citizens' trust in regulators generally increases when they read that a regulator has imposed a penalty on a regulatee that violated the rules, especially for financial regulators. Although their study did not focus on specific enforcement styles, their findings suggest that citizens value action. Their study suggests that a less coercive approach may be less appreciated by the public. We suggest the following:

- **H2c:** *Trust in firms will be higher in enhanced self-regulatory regimes that includes the possibility for private sanctions rather than in enhanced self-regulatory regimes that does not include this possibility.*

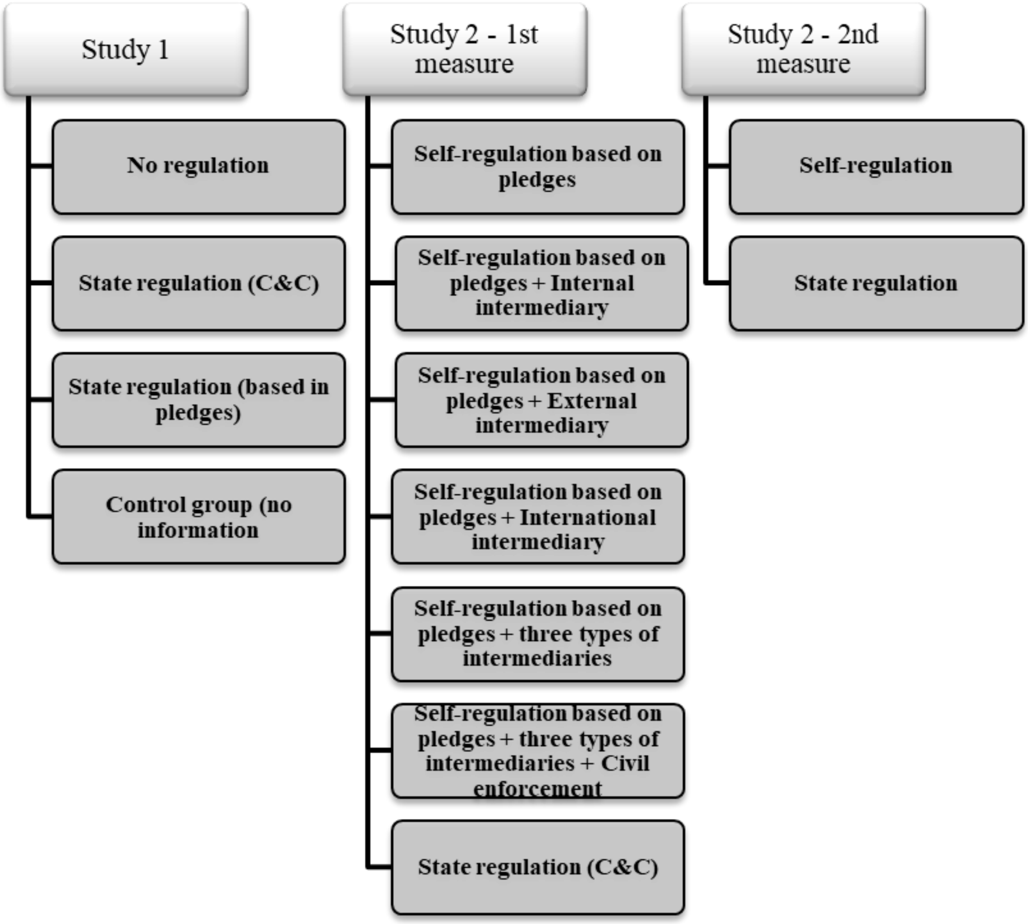
2. Methods

2.1. Design

We designed and conducted two experimental survey studies in which respondents were presented with a baseline story about a new Fintech company in the Open Banking field. The story described a hypothetical company that has developed a new financial technology that improves the cost of credit and loans. The story clearly stated that to use its service, one must give the company access to one's personal bank account (Appendices A.1. & A.2.). After reading the baseline story, the respondents were randomly assigned to different treatment groups which controlled for the regulatory regime (Figure 2).

In the first study, respondents were randomly assigned to 4 groups, and in the second study, they were assigned to seven groups. When a state regulator was described, it was also depicted as a hypothetical regulator. Furthermore, in the second study, we performed a *within-subject* analysis in addition to the *between-subject* analysis. Thus, after the initial measure of trust, the respondents read another vignette that reversed the terms introduced in the first vignette read. Groups 1-6, who were initially exposed to various types of self-regulation, were told in the second stage that there was now a state regulator, without specifying any regulatory instrument. Group 7, who originally read about state regulation, were told in the second stage that there is no longer a state regulator and instead there is now a self-regulatory regime, where the company pledges it complies with the rules.

Figure 9: Design of the studies- Experimental Groups



The advantage of the experimental design is that it allows us to control the treatments to which respondents are exposed. More importantly, using a hypothetical market firm and a hypothetical regulator allows us to isolate the effect of other variables and capture only the effect of our treatment, regulatory style, on trust in the market firm. Moreover, the selected case, Open Banking, was a new field in Israel at the time of the study with relatively little public knowledge. This case was chosen because its novelty reduces the external factors that may influence trust in Fintech firms, including the reputation of existing firms in the field and knowledge of existing government regulatory approaches to regulating open banking.

2.2. Sample

The use of selective samples (such as student samples) makes it difficult to generalize the results to the general population. Therefore, both experiments were conducted on representative samples of Israeli citizens. The studies were conducted independently, several months apart. Both studies were conducted online using Qualtrics software among a sample of adult Israeli citizens recruited through *Ipanel* - an Internet panel company.

The first study was conducted between February 27th and March 17th, 2020 and yielded 597 valid responses. The online survey link was sent to 10,720 people, and a total of 2206 have consented to participate in the experiment (a response rate of 20.5%). To ensure that the samples will be compositionally similar to the population of Israeli society, the sampling method included setting quotas for the following demographic variables: Gender, age, education, income level, ethnic identity (Tipton et al., 2014). After applying quotas, a total of 653 respondents completed the survey. Of these, we later filtered out 56 observations (8.6%) due to multiple entries from the same IP address (n = 4); and failure at the alert test (n = 52).

The second study was carried out during July 26th and August 31st, 2020 and resulted in 598 valid answers. The online survey link was sent to 5783 people and a total of 2117 have consented to participate in the experiment (a response rate of 36.6%). The increase in the response rate results from a change of strategy in the outreach of the panel company. After applying quotas, a total of 655 respondents completed the survey. Of these, we later filtered out 57 observations (8.7 %) due to multiple entries from the same IP address (n = 4); and failure at the alert question (n = 53). A comparison of the demographic characteristics of the sample and the general population shows that both samples are broadly representative, although people over 50 are slightly under-represented (Appendix A.3.).

2.3. *Manipulated and Measured Variables*

The outcome of interest is the respondents' trust in the market entity. However, we used a different measuring approach in each study. In the first study, we adapted the CTGO scale of trust developed by Grimmelikhuijsen and Knies (2017) and have added two additional items measuring the willingness to engage with the company. All items were measured on a 5-point Likert scale ranging from 'Strongly disagree' (1) to 'Strongly agree' (5) (Cronbach's $\alpha = .89$). The sample average was 2.707 and the standard deviation was 0.676.

The first study additionally included a measure of trust in the regulator. The measure was also an adaption of the CTGO scale including 3 items for each dimension of trustworthiness (ability, benevolence, and capability) with the addition of one general item of trust -'To what extent do you trust the Governmental Authority for Financial Information Safety?' ranging on a 5-point Likert scale from 'Not at all' (0) to 'To a great extent' (5) (Cronbach's $\alpha = .94$). The sample average was 3.314 and the standard deviation was 0.791.

In the second study, trust in the market entity has been measured using only four items (Appendix A.4.). We reduced the number of items to make the questionnaire less lengthy and decrease respondent fatigue. The items were measured on a 5-point Likert scale ranging from 'Strongly disagree' (1) to 'Strongly agree' (5). These items were asked twice, once after the first random assignment (Cronbach's $\alpha = .88$) and then again after reading the reversed vignettes (Cronbach's $\alpha = .93$).

In both studies, we measured additional variables of interest which we assumed might have a role in mediating the effect of regulation. First, we were interested in measuring the respondents' affiliation with either the market or regulators. Therefore, respondents were asked about their sector of employment ('public,' 'private,', 'NGOs', 'unemployed' or 'student'). Second, respondents were asked about their habits of consuming financial media ('a few times a day', 'once a day', 'a few times a week', 'once a week', 'less than once a week', 'never').

Also, respondents were asked about multiple demographic (income level, education, age, and gender), social (self-identity (ethnicity), religiosity, tendency to trust people and satisfaction from life) and political variables (party affiliation and perception of the corruption of the government).

In the second study we also measured the respondents' perception of risk in the context of personal data exploitation. To this end, a measure of two items was constructed asking to what extent are they concerned from the following situations; (1) that their bank account and credit card information will land in the wrong hands, and (2) that the credit company will misuse their personal information (measured on a 5-point Likert scale ranging from 'not at all concerned-' (1) to 'extremely concerned (5) (Cronbach's $\alpha = .77$).

3. Findings

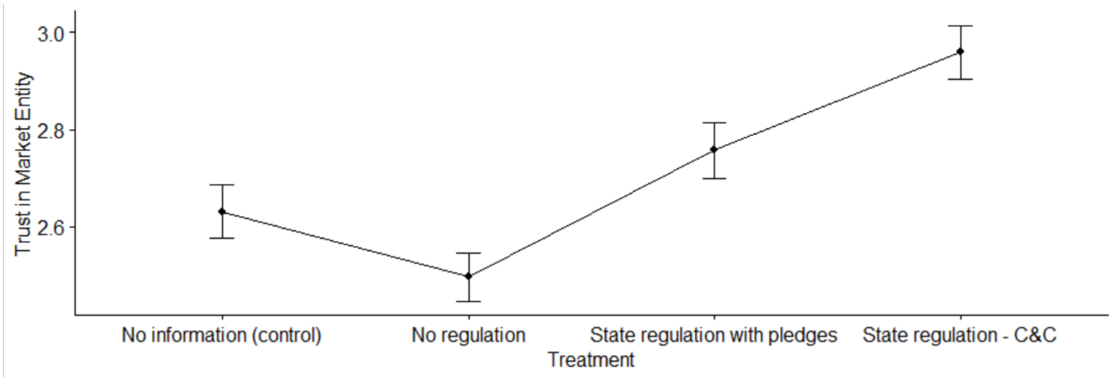
Appendices A.5. and A.6. outline the demographic characteristics and additional measures of the samples by treatment group, the number of participants in each group, and the balance tests, showing that the experimental groups are mostly balanced, which indicates that the randomization was successful. However, we detected some imbalances between the groups with respect to gender, working place and satisfaction from life. Therefore, the results are reported with these variables as control variables.

3.1. Study 1

Study 1 compares between C&C state regulation, state regulation based on pledges, and no regulation. It also includes a control group, which was introduced only with the baseline story, with no information on regulation whatsoever. To analyse the results, we first ran a one-way ANOVA test which showed that the difference between the groups is significant ($F(3,573) = 13.16$, $p<0.001$), which confirms that the type of regulation does affect trust in the market entity. A *post-hoc* analysis using Tukey test showed that all groups were significantly different from each other expect of “no regulation” – “control” and “state reg- pledges” - “control”. The effect is considered medium (Cohen’s f=0.26, η^2=0.064).

Figure 3 shows significant differences in the degree of trust in the company among the three treatment groups. The figure shows that trust in the company is lowest when there is no regulation (M=2.5, SD=0.62), higher when regulation is characterized by state regulation that relies on pledges (M=2.75, SD=0.67), and highest when there is C&C state regulation (M=2.96, SD=0.66) (the control group showed M=2.63, SD=0.65).

Figure 3: Differences in dependent variable between experimental groups in Study 1



Notes: Points indicate group means; error bars indicate 95 % confidence intervals; n = 150 (control), 153 (no regulation), 147 (state regulation based on pledges), 147 (state regulation C&C).

We ran a contrasted regression model to further test the hypotheses and found that state regulation (of both types) is associated with a significant increase in trust compared to no regulation. Furthermore, C&C state regulation is associated with a further increase in trust compared to state regulation that relied on pledges (Table 1), which confirms Hypothesis H1.b.

Table 1: Regression Analyses with Contrasts—The Effect of Regulatory Regime on Trust in Market Entity Study 1

	Dependent Variable: Trust in market entity			
Predictors	***Estimates***	***std. Error***	***CI***	***p***
(Intercept)	2.711	0.027	2.657 – 2.764	**<0.001**
No regulation vs Regulation	0.121	0.022	0.078 – 0.164	**<0.001**
State regulation based on pledges vs C&C state regulation	0.101	0.039	0.025 – 0.177	**0.010**
condition []	0.092	0.055	-0.015 – 0.199	**0.094**
Observations				577
R^2				0.064

Notes: Table entries are non-standardized OLS-regression coefficients.

We also ran a linear regression (Table 2) to predict trust in the company based on the treatment, while controlling for the variables that showed significant in the balance test, and we find that both the 'no regulation' and the 'C&C state regulation' effects are significant. This means, that knowing that a company is unregulated reduces trust in that company and knowing that a company is regulated by a government agency and that regulation is characterized by a high degree of monitoring increases trust in the company.

Table 2: Regression Analyses—The Effect of Regulatory Regime on Trust in Market Entity Study 1

	Dependent Variable: Trust in market entity			
Predictors	***Estimates***	***std. Error***	***CI***	***p***
(Intercept)	2.904	0.137	2.636 – 3.173	**<0.001**
Condition: No regulation	-0.141	0.078	-0.295 – 0.013	**0.072**
Condition: State regulation based on pledges	0.107	0.080	-0.049 – 0.264	0.178
Condition: C&C state regulation	0.348	0.080	0.191 – 0.504	**<0.001**
Gender: female	-0.146	0.056	-0.256 – 0.036	**0.009**
Satisfaction from life	-0.078	0.042	-0.160 – 0.005	**0.065**
Working place: public	0.019	0.065	-0.108 – 0.146	0.765
Working place: NGO	0.300	0.221	-0.135 – 0.735	0.176

Working place: unemployed	0.150	0.101	-0.048 – 0.348	0.137
Working place: student	0.090	0.116	-0.139 – 0.318	0.441
Working place: other	0.042	0.133	-0.220 – 0.303	0.753
Observations				550
R^2 / R^2 adjusted				0.093 / 0.077

Notes: Table entries are non-standardized OLS-regression coefficients. The reference category for the manipulation conditions is the control group.

Since we measured trust in the regulator, we were also able to test whether the effect of the existence and type of regulation on trust in the company differs according to different levels of trust in the regulator itself. We find evidence of a significant interaction effect between trust in the regulator and trust in the market entity (p<0.001). Specifically, the group that cause this significance is the state regulation based on pledges (Table 3).

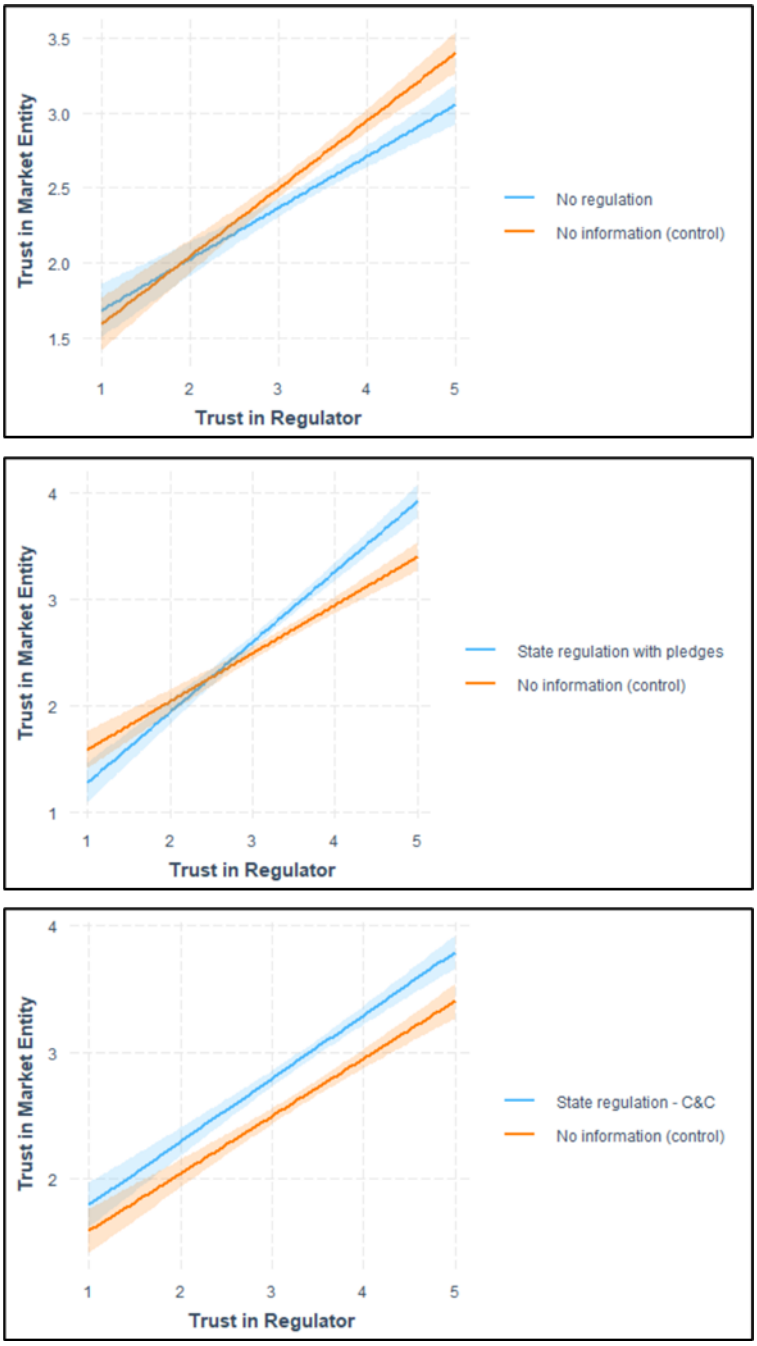
Table 3: Regression Analyses—The Effect of Regulatory Regime on Trust in Market Entity Controlling for Trust in the Regulator Study 1

	Dependent Variable: Trust in market entity			
Predictors	***Estimates***	***std. Error***	***CI***	***p***
(Intercept)	1.139	0.190	0.766 – 1.511	**<0.001**
No regulation	0.201	0.271	-0.329 – 0.732	0.457
State regulation based on pledges	-0.518	0.278	-1.063 – 0.028	0.063
C&C state regulation	0.159	0.268	-0.366 – 0.684	0.552
Trust in the regulator	0.453	0.056	0.344 – 0.562	**<0.001**
No regulation*Trust in the regulator	-0.110	0.079	-0.264 – 0.045	0.165
State regulation based on pledges *Trust in the regulator	0.208	0.083	0.045 – 0.370	**0.013**
C&C state regulation *Trust in the regulator	0.046	0.078	-0.107 – 0.199	0.559
Observations				566
R^2				0.394

Notes: Table entries are non-standardized OLS-regression coefficients. The reference category for the manipulation conditions is the control group.

This finding can be taken as an indication that public trust in the regulator is important when the state regulation is based on pledges. In contrary, when regulation involves sanctions and oversight, trust in the regulator has a smaller impact on trust in the regulated market companies. Finally, Figure 4 illustrates the interaction model.

Figure 4: Regulatory Regime and Trust in Regulator as predictors of Trust in market entity

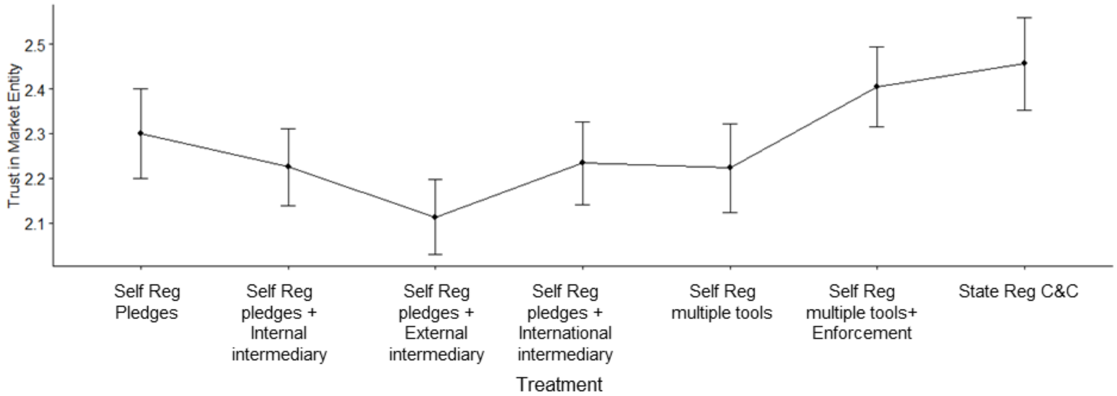


3.2. Study 2

The main purpose of the second study was to deepen our understanding of how different self-regulation regimes can yield high levels of public trust in the market entities. In this study, we measured trust in the company twice; the first time, comparing six different versions of self-regulation, with a C&C state regulation regime. In the second measure, we reversed the treatments, giving information on a state regulator for the six self-regulation groups, and information on self-regulation instead of state regulation to the reference group.

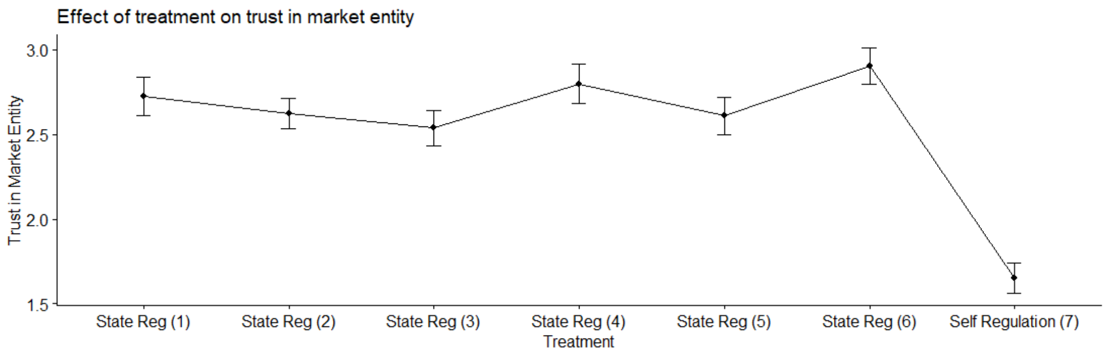
Figure 5 shows that in the first measure, trust in the market was the highest in the state regulation group comparing to all self-regulation groups (groups 1-6). Figure 6 shows that the second measure yielded the same result; that state regulation is correlated with higher trust in the company comparing to self-regulation. Table 4 shows the regression results.

Figure 5. Differences in dependent variable between experimental groups in Study 2 – First Measure



Notes: Points indicate group means; error bars indicate 95 % confidence intervals; n = 82 (Self Reg Pledges), 81 (Self Reg Pledges + Internal Int.), 81 (Self Reg Pledges + External Int.), 77 (Self Reg Pledges + International Int.), 83 (Self Reg Multiple tools), 66 (Self Reg Multiple tools+ Enforcement), 75 (State Reg C&C).

Figure 6. Differences in dependent variable between experimental groups in Study 2 – Second Measure



Notes: Points indicate group means; error bars indicate 95 % confidence intervals; n = 82 (Group 1), 81 (Group 2.), 81 (Group 3), 77 (Group 4), 83 (Group 5), 66 (Group 6), 75 (Group 7).

Table 4: Regression Analyses—The Effect of Regulatory Regime on Trust in Market Entity Study 2 First Measure

	Dependent Variable: Trust in market entity							
	First measure				**Second measure**			
Predictors	***Estimates***	***std. Error***	***CI***	***p***	***Estimates***	***std. Error***	***CI***	***p***
(Intercept)	2.456	0.096	2.267 – 2.645	**<0.001**	1.651	0.108	1.440 – 1.862	**<0.001**
Group 1	-0.157	0.133	-0.418 – 0.105	0.241	1.072	0.148	0.781 – 1.362	**<0.001**
Group 2	-0.231	0.133	-0.492 – 0.031	**0.084**	0.973	0.148	0.682 – 1.264	**<0.001**
Group 3	-0.344	0.134	-0.606 – -0.081	**0.010**	0.887	0.149	0.595 – 1.180	**<0.001**
Group 4	-0.223	0.136	-0.489 – 0.044	0.102	1.147	0.152	0.849 – 1.444	**<0.001**
Group 5	-0.233	0.133	-0.493 – 0.027	**0.079**	0.958	0.148	0.669 – 1.247	**<0.001**
Group 6	-0.051	0.140	-0.326 – 0.224	0.718	1.255	0.156	0.948 – 1.561	**<0.001**
Observations	540				537			
R^2	0.017				0.143			

Notes: Table entries are non-standardized OLS-regression coefficients. The reference category for the manipulation conditions is Group 7.

The investigation of the impact of the regulatory regime on trust in the market entity using planned contrasts revealed that self-regulation was associated with a significant decrease in trust compared to state-regulation (Table 5). Additionally, it was found that self-regulation without enforcement was associated with a significant decrease in trust compared to self-regulation with enforcement.

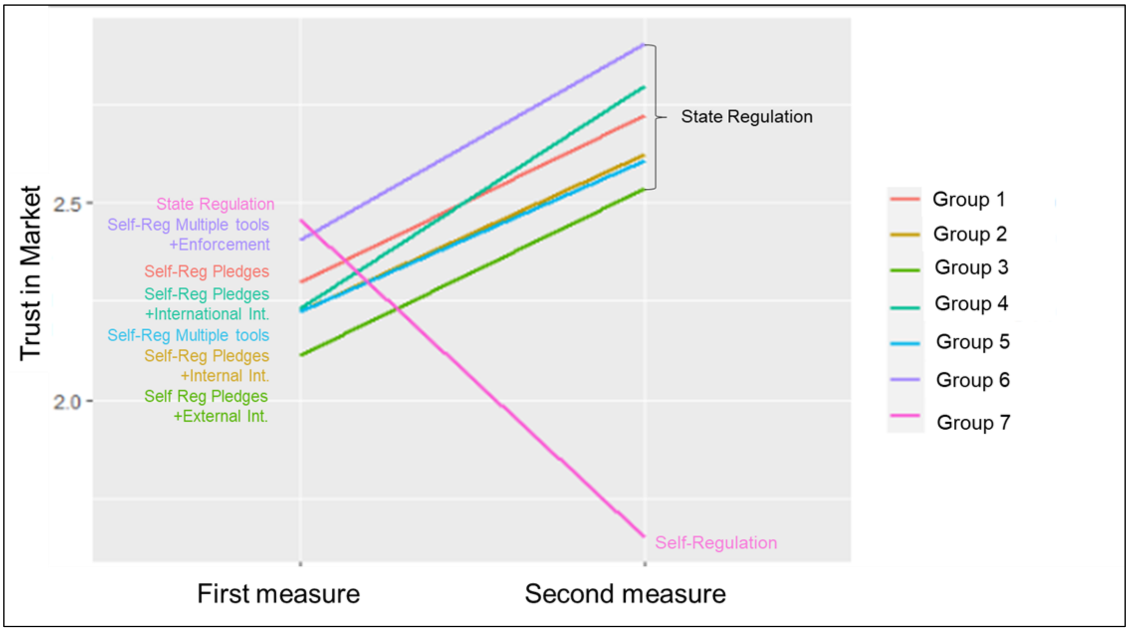
Table 5: Regression Analyses with Contrasts—The Effect of Regulatory Regime on Trust in Market Entity Study 2

	Dependent Variable: Trust in market entity			
Predictors	**Estimates**	**std. Error**	**CI**	**p**
(Intercept)	2.279	0.036	2.209 – 2.350	**<0.001**
State regulation vs self-regulation (H1a)	-0.029	0.015	-0.059 – -0.000	**0.047**
Two tools vs only pledge (H2a)	0.027	0.028	-0.027 – 0.081	0.329
Two intermediaries vs one intermediary (H2b)	-0.001	0.027	-0.055 – 0.052	0.959
Possibility of sanctions vs no possibility of sanctions (H2c)	-0.031	0.018	-0.067 – 0.005	**0.091**
condition []	-0.095	0.094	-0.279 – 0.089	0.311
condition []	0.012	0.094	-0.279 – 0.089	0.311
Observations	540			
R2 / R2 adjusted	0.017 / 0.006			

Notes: Table entries are non-standardized OLS-regression coefficients.

To perform a *within-subject* analysis, we ran a repeated measure ANOVA and found that trust in the market entity was statistically significantly different at the two measures, F(1, 536) = 63.6, p<0.0001, generalized eta squared = 0.022. *Post-hoc* analyses with a Bonferroni adjustment revealed that all the pairwise differences, between time points, were statistically significantly different (p<0.001). Figure 7 shows the marginal effects of trust for all seven conditions of regulation in both measures. It shows that group 7, which was presented with state regulation in the first stage, and with self-regulation in the second, has a sharp decrease in its level of trust in the market.

Figure 7. Differences in first and second measures of the dependent variable in Study 2: Marginal effects



3.3. Discussion

Hypothesis 1a predicts that trust in firms is higher under state regulatory regimes than under self-regulatory regimes. This hypothesis is confirmed in both measures of Study 2, where we find that all variants of self-regulation led to lower public trust in firms than government C&C regulation. Hypothesis 1b predicts that trust in firms will be higher in state regulatory regimes in which the state regulator monitors firms than in state regulatory regimes in which the regulator reduces monitoring and relies on pledges. This hypothesis is confirmed in Study 1, where we find that C&C state regulation leads to a higher level of trust in the firm than state regulation based on pledges.

Interestingly, the exploratory analysis we conducted on the role of trust in the regulator shows a significant interaction between trust in the regulator and the type of regulation. Specifically, we found that high levels of trust in regulation can lead to higher levels of trust in the firm when state regulation is based on pledges.

Hypothesis 2a predicts that trust in firms will be higher in enhanced self-regulatory regimes that include an intermediary than in thin self-regulatory regimes that rely only on pledges. The results do not confirm hypothesis 2a. The results also failed to confirm hypothesis 2b, which states that trust levels are not significantly different between self-regulatory regimes that include multiple intermediaries and enhanced self-regulatory regimes that include only one type of intermediary. Finally, hypothesis 2c was confirmed. This hypothesis states that trust in companies is higher in enhanced self-regulatory regimes that provide for the possibility of sanctions than in enhanced self-regulatory regimes that do not. Analysis of the results of Study 2 showed that self-regulation without enforcement was associated with a significant decrease in trust compared to self-regulation with enforcement.

4. Conclusions

In this study, we explore the relationship between trust and regulation by examining the extent to which different types of regulatory designs affect citizens' trust in market actors.

Contrary to our expectations, we find that all varieties of self-regulation led to lower levels of public trust compared to state regulation. However, we did find that the possibility of sanctions in case of violations (civil enforcement) increases trust comparing with self-regulation without sanctions.

In addition, and as we expected, we find that a traditional regulatory design involving command-and-control state regulation leads to higher levels of trust in market entities than a looser design of state regulation based on pledges. This suggests a public preference for greater government oversight and functional economic benefits of government regulation, as respondents were willing to trust the market entity more when the state regulator oversees the market. However, the results of our interaction analysis suggest that under conditions of pledge-based regulation, public trust in the market is enhanced when there is a high degree of trust in the regulator itself.

This finding points to a very important insight into the interaction between trust and regulatory regimes: regulatory designs based on pledges cannot gain public trust if the public does not trust regulators. Without public trust in regulators, pledges are ill-suited to elicit trusting public behaviour and enable prosperous economic activity. In this respect, this hybrid design of a state regulator relying on pledges, an act of trust, could end up doing more harm than good. Notably, when regulators resort to sanctions, they may improve public trust in market participants, even if they enjoy a relatively low level of public trust. However, excessive reliance on a punitive style of regulation could exacerbated destructive processes, including increased harm to the ability of firms to feel trusted - an issue beyond the scope of this paper, but important, nonetheless.

The results of this study pave the way for a different theoretical perspective on the growth of regulation and the relationships between regulation and markets. From this perspective, government regulation can increase trust in markets and thus an overlapping interest of businesses and the public in the need for regulation. This overlapping interest may explain the continued growth, some would say explosion, of state-based regulation in neoliberal countries.

Moreover, the results of this study emphasize the difference between intrinsic and extrinsic trust. Intrinsic trust in market entities occurs when people trust these entities and view them as competent, benevolent, and honest, regardless of the degree and form of regulation (Rousseau et al., 1998). In contrast, extrinsic trust, or institutional trust, is the extent to which people trust market bodies and take risks primarily because there is a regulator to protect them and ensure that market actors to not break rules and cause them harm (Cook, Levi & Hardin, 2009). Extrinsic trust is therefore much more likely to be influenced by what the public thinks about the quality of regulation than it is by the characteristics of the market. Intrinsic trust is based more on factors such as reputation, size, and past interactions and is therefore not part of this study.

4.1. Implications

Several important implications emerge from these results. First, consumers' willingness to place themselves in a vulnerable position and trust this market depends on both the design of regulation and their trust in the regulator. Therefore, consideration of trust in regulators is a critical element that must be considered. In other words, the ability of governments to move to a less punitive approach to regulation and to use 'smart regulation' tools depends on the public's ability to trust in the regulator. Without this trust, regulators' reliance on self-regulation could prove counterproductive for both market actors and the public, and regulators' ability to innovate their regulatory approach will be severely limited. This could lead to a permanence of command-and-control, limiting economic activity given the need to see a punitive approach from regulators to feel safe. This suggests that a possible entry point into the 'virtuous circle of trust' is in the hands of regulators and their ability to build public trust in them. Punitive state-regulation, while a safe, risk-free way to maintain public trust in market actors, is an ongoing act of distrust in the market.

Second, contrary to popular belief, regulation can put both market actors and the public on the side of the winners of regulation. From this perspective, the assumption that less regulation is always better for business is over inclusive and undertheorized. In many contexts where public knowledge about the integrity and competence of market actors is limited, such as in the open banking and Fintech sector, more regulation can mean more trust in the market and is therefore better for markets.

Another important conclusion that emerges from our study relates to the firms themselves. From our findings, it appears that many of the enhanced self-regulatory systems that rely on intermediaries do not achieve satisfactory levels of public trust. This could also be because many of these intermediaries operate under the radar. Firms should prioritize communicating the transparency and independence of intermediaries in their field, as it would be in their interest to promote public trust in such mechanisms.

4.2. Limitations and future research

First, we should acknowledge the concern for external validity, which is, of course, part of any behavioural study conducted in the field. It is possible to test the generalizability of our results by conducting additional studies in other, perhaps more conventional, and less innovative contexts. Especially since the effects we found are relatively small. One might hypothesise that in contexts where risk is more tangible, such as health care regulation, the magnitude of the effects might be larger.

Second, the limitation of Israel as the only case study is another limitation of this study that could be addressed in future studies. Israel scores relatively low on trust in political institutions in many international surveys (Maman, et al. 2020). Future studies could opt for a comparative analysis.

Third, although the results of our studies are coherent, they still do not provide a complete understanding of the mechanism that leads people to trust the market more under government regulation. One explanation would be that these are genuine preferences. However, it could also be that people trust the market more when it is regulated by the state because they believe that this is the most effective way to regulate market actors. In this sense, it would be worthwhile for future studies to control for differential levels of regulatory effectiveness or other regulator-related variables that might mediate trust in the regulatees (such as capacity, expertise, or democratic qualities) or market-related factors such as reputation and information gaps.

In the current study, participants did not have a true opportunity to assess the company's trustworthiness because a hypothetical company was described, which may explain their greater need to rely on regulators. Hence, future studies should expand the types of regulators and firms examined. One of the most important ways for companies to gain the public's trust is to have an impeccable track record, which signals to future customers that their trust is less likely to put them at risk.

Finally, future studies should focus on examining other forms of self-regulation. In our study, we did not find consistent differences in the effects of different self-regulatory regimes. Future studies could examine other self-regulatory instruments and regimes to provide even more nuanced evidence on what type of regulation might increase public confidence in the market.

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APPENDICES

A.1. Description of the Case and the Experimental Treatment (Study 1).

(Translated from Hebrew)

Case description (all respondents received):

Recently in Israel, new FinTech companies began to offer financial services. A new company called "Superior information" offers a service of improving credit and lowering costs of loans and fees. However, in order to enjoy the service, you are required to grant the company access to use your personal information in your bank account.

Treatment group 1: No regulation

Currently, there is no governmental regulation in Israel over the activity of companies like this one with regard to managing and saving personal consumer information.

Treatment group 2: State regulation based on pledges

The Governmental Authority for Financial Information Safety, a governmental agency aimed at regulating and oversighting the protection of personal information of FinTech services has granted the "Superior information" company a license. The license was given after the company has declared that it obeys the regulations of protection of personal information of consumers. The Governmental Authority for Financial Information Safety does not oversight the activity of companies after a license has been granted.

Treatment group 3: Command-and-control state regulation

The Governmental Authority for Financial Information Safety, a governmental agency aimed at regulating and oversighting the protection of personal information of FinTech services has granted the "Superior information" company a license. The Governmental Authority for Financial Information Safety examines every new financial technology offered in the market, and only grants a license after finding that it fits with regulation of protection of personal information of consumers. The Governmental Authority for Financial Information Safety also oversights the activity of companies that receive a license. In case a violation of regulation occurs, the Governmental Authority for Financial Information Safety will fine the company with high amount or cancel the license if the violation reoccurs.

Control group: No information

The control group received only the description of the product without any further information.

A.2. Description of the Case and the Experimental Treatment (Study 2).

(Translated from Hebrew)

Case description (all respondents received):

Recently in Israel, new FinTech companies began to offer financial services. A new company called "Superior information" offers a service of improving credit and lowering costs of loans and fees. However, in order to enjoy the service, you are required to grant the company access to use your personal information in your bank account.

Treatment group 1: Self-regulation – Pledges

The company has declared it complies with existing rules regarding holding and managing consumers' personal information.

Treatment group 2: Self-regulation - Pledges + Internal intermediary

The company has declared it complies with existing rules regarding holding and managing consumers' personal information. In addition, the company employs a lawyer, which is in charge of the fair management of personal information.

Treatment group 3: Self-regulation - Pledges + External approval

The company has declared it complies with existing rules regarding holding and managing consumers' personal information. In addition, it received the approval of an NGO that promotes the fair use of consumers' personal information.

Treatment group 4: Self-regulation - Pledges + Certification

The company has declared it complies with existing rules regarding holding and managing consumers' personal information. In addition, the company has been audited by an international certification organization and received accreditation.

Treatment group 5: Self-regulation - Pledges + Internal intermediary + External approval + Certification

The company has declared it complies with existing rules regarding holding and managing consumers' personal information. In addition, the company employs a lawyer, which is in charge of the fair management of personal information. It has also received the approval of an NGO that promotes the fair use of consumers' personal information. In addition, the company has been audited by an international certification organization and received accreditation.

Treatment group 6: Self-regulation - Pledges + Internal intermediary + External approval + Certification+ Enforcement

The company has declared it complies with existing rules regarding holding and managing consumers' personal information. In addition, the company employs a lawyer, which is in charge of the fair management of personal information. It has also received the approval of an NGO that promotes the fair use of consumers' personal information. In addition, the company has been audited by an international certification organization and received accreditation.

In the event that "Superior information" will violate the rules it has committed to the NGO's approval and international accreditation will be annulled.

Control group: State regulation

The Governmental Authority for Financial Information Safety, a governmental agency aimed at regulating and oversighting the protection of personal information of FinTech services has granted the "Superior information" company a license. The Governmental Authority for Financial Information Safety examines every new financial technology offered in the market, and only grants a license after finding that it fits with regulation of protection of personal information of consumers. The Governmental Authority for Financial Information Safety also oversights the activity of companies that receive a license. In case a violation of regulation occurs, the Governmental Authority for Financial Information Safety will fine the company with high amount or cancel the license if the violation reoccurs.

Overturning the terms – second round vignettes

Groups 1-6 read the following vignette:

Now, assume that in Israel there is a Governmental Authority for Financial Information Safety, a governmental agency which regulates the protection of personal information in FinTech companies.

Group 7 read the following vignette:

Now, assume that in Israel there is no governmental agency that regulates the protection of personal information in FinTech companies. Instead, the "Superior information" company has declared it complies with existing rules regarding holding and managing consumers' personal information.

A.3. Demographic Characteristics: Comparing Samples and Population

	Study 1	*Study 2*	*Population (2018)*
% Female	50.5	50.6	51.3
Age			
918-2	29.8	30.4	21.9
30-39	21.7	24.7	20.5
40-49	18.4	18.7	18.5
50+	29.8	26	39.1
Education			
Low	17.8	14.3	11.4
Middle	21.6	20.5	21.8
High	60.3	65.1	66.8
Income			
Low	50.4	50	50
High	49.6	49.9	50
Identity			
Jewish	77.3	83.3	82.1
Arab	18.4	16.6	17.9

Note: the population data was generated by the Israeli Central Bureau of Statistics (CBS).

A.4. Study 2: outcome measure items

Items	First Measure	Second Measure
I trust the 'Superior information' company, to not exploit my personal information	Cronbach's α = .88 Mean =2.274 Standard deviation = 0.831	Cronbach's α = .93 Mean = 2.55 Standard deviation = 0.988
Most of the Israeli public will trust the 'Superior information' company to not exploit their personal information		
I feel confident to grant the 'Superior information' company access to use my bank account data		
Most of the Israeli public will have the confidence to grant the 'Superior information' company access to use their bank account data		

A.5. Balance across experimental conditions – Study 1

	No information (control) N=150	**No regulation** N=153	**State regulation based on pledges** N=147	**C&C state regulation** N=147	**p-value**
Gender%					
Female	52	52.3	48.3	49.7	0.884
Age%					
18to22	14	9.15	15.6	10.9	**0.008**
23to29	12	12.4	20.4	25.9	
30to39	25.3	22.9	19.7	19	
40to49	19.3	14.4	20.4	19.7	
50to70	28	40.5	23.8	24.5	
70+	1.33	0.65	0	0	
Highest education%					
Elementary	2.67	3.92	2.04	2.72	0.978
Partial_Secondary	16	14.4	15.6	14.3	
Full_Secondary	22	20.3	23.1	21.1	
High_Edu	2.67	4.58	4.76	2.04	
Partial_Academic	6	4.58	6.12	3.4	
B.A.	35.3	33.3	28.6	36.1	
M.A.+	15.3	19	19.7	20.4	
Income%					
LessThan5000	31.3	26.8	21.8	30.6	0.130
5000to7500	19.3	22.2	31.3	18.4	
7500to10500	21.3	19.6	19.7	19.7	
10500to13000	9.33	9.15	14.3	15	
MoreThan13000	18.7	22.2	12.9	16.3	
Identity%					
Jewish	79.3	77.1	79.6	73.5	0.825
Christian	0	0.65	1.36	1.36	
Arab	4.67	5.88	4.76	7.48	
No_Religion	2	3.27	0.68	2.04	
Muslim	8	5.88	7.48	8.84	
Chrisitian_Arab	4	3.27	2.72	4.08	
Other	1.33	0.65	2.72	0.68	
Druze	0.67	3.27	0.68	2.04	
Religiosity (mean and standard deviation)	4.73 (3.01)	4.54 (2.84)	4.86 (3.14)	4.98 (3.00)	0.621
Working place%					
Private	46.7	42.5	48.3	40.1	**0.015**
Public	26.7	38.6	24.5	38.1	
NGO	2	1.31	1.36	2.04	
Unemployed	12.7	7.19	6.8	11.6	
Student	6.67	3.27	9.52	7.48	
Other	5.33	7.19	9.52	0.68	

Perception of government corruption (mean and standard deviation)	3.60 (1.19)	3.75 (1.23)	3.79 (1.14)	3.65 (1.25)	0.494
Consumption of finance media%					
Never	30.7	26.1	19.7	25.9	0.358
LessThanOnceAWeek	28	21.6	27.2	31.3	
OnceAWeek	8.67	13.1	14.3	14.3	
SeveralTimesAWeek	12.7	20.3	19.7	12.9	
OnceADay	12.7	11.1	8.84	8.16	
SeveralTimesADay	7.33	7.84	10.2	7.48	
Satisfaction from life (mean and standard deviation)	2.89 (0.70)	2.94 (0.66)	2.80 (0.66)	3.00 (0.66)	**0.092**
Trust in the regulator (mean and standard deviation)	3.31 (0.82)	3.36 (0.78)	3.22 (0.74)	3.36 (0.83)	0.417
Tendency to trust people (mean and standard deviation)	3.05 (0.74)	3.10 (0.71)	3.15 (0.74)	3.18 (0.68)	0.424

A.6. Balance across experimental conditions – Study 2

	Group 1 N=82	**Group 2 N=81**	**Group 3 N=81**	**Group 4 N=77**	**Group 5 N=83**	**Group 6 N=66**	**Group 7 N=75**	**p.overall**
Gender%								
Female	56.1%	51.9%	50.6%	49.4%	49.4%	43.9%	52.0%	0.883
Age%								
18to22	12.2%	17.3%	8.64%	13.0%	9.64%	18.2%	6.67%	0.854
23to29	17.1%	21.0%	14.8%	19.5%	22.9%	10.6%	21.3%	
30to39	23.2%	28.4%	28.4%	22.1%	21.7%	22.7%	26.7%	
40to49	20.7%	13.6%	24.7%	18.2%	16.9%	21.2%	16.0%	
50to70	26.8%	19.8%	22.2%	27.3%	27.7%	27.3%	28.0%	
70plus	0.00%	0.00%	1.23%	0.00%	1.20%	0.00%	1.33%	
Highest education%								
Elementary	1.22%	0.00%	3.70%	1.30%	1.20%	0.00%	2.67%	0.877
Partial_Secondary	9.76%	16.0%	12.3%	18.2%	9.64%	9.09%	14.7%	
Full_Secondary	25.6%	19.8%	18.5%	20.8%	20.5%	27.3%	12.0%	
High_Edu	11.0%	11.1%	8.64%	7.79%	13.3%	12.1%	17.3%	
Partial_Academic	14.6%	8.64%	8.64%	11.7%	7.23%	7.58%	10.7%	
B.A.	29.3%	29.6%	35.8%	27.3%	33.7%	28.8%	26.7%	
M.A.+	8.54%	14.8%	12.3%	13.0%	14.5%	15.2%	16.0%	
Income%								
LessThan5000	26.8%	32.1%	18.5%	28.6%	30.1%	31.8%	28.0%	0.598
5000to7500	28.0%	24.7%	28.4%	18.2%	16.9%	13.6%	24.0%	
7500to10500	22.0%	14.8%	21.0%	27.3%	24.1%	25.8%	20.0%	
10500to13000	13.4%	9.88%	18.5%	15.6%	14.5%	13.6%	9.33%	
MoreThan13000	9.76%	18.5%	13.6%	10.4%	14.5%	15.2%	18.7%	
Identity%								
Jewish	75.6%	79.0%	82.7%	87.0%	73.5%	81.8%	77.3%	0.553
Christian	1.22%	0.00%	0.00%	0.00%	1.20%	1.52%	4.00%	
Arab	1.22%	4.94%	4.94%	5.19%	3.61%	3.03%	2.67%	
No_Religion	3.66%	2.47%	0.00%	1.30%	7.23%	3.03%	1.33%	
Muslim	7.32%	6.17%	7.41%	3.90%	4.82%	1.52%	2.67%	
Chrisitian_Arab	4.88%	4.94%	2.47%	0.00%	4.82%	6.06%	6.67%	
Other	2.44%	0.00%	1.23%	1.30%	2.41%	0.00%	4.00%	
Druze	3.66%	2.47%	1.23%	1.30%	2.41%	3.03%	1.33%	
Religiosity (mean and standard deviation)	4.44 (3.13)	3.80 (2.64)	4.78 (2.75)	4.74 (2.73)	4.08 (2.71)	3.98 (2.85)	3.80 (2.92)	0.113
Working place%								
Private	53.7%	49.4%	50.6%	48.1%	41.0%	37.9%	42.7%	0.661
Public	24.4%	22.2%	25.9%	20.8%	36.1%	24.2%	24.0%	
NGO	1.22%	6.17%	3.70%	1.30%	2.41%	6.06%	4.00%	
Unemployed	11.0%	7.41%	7.41%	18.2%	10.8%	16.7%	13.3%	
Student	4.88%	7.41%	4.94%	6.49%	7.23%	6.06%	6.67%	
Other	4.88%	7.41%	7.41%	5.19%	2.41%	9.09%	9.33%	
Perception of government corruption (mean and standard deviation)	4.04 (1.13)	3.98 (1.10)	3.84 (1.10)	3.73 (1.21)	3.96 (1.06)	3.82 (1.24)	4.08 (1.09)	0.438

Consumption of financial media%								
SeveralTimesADay	15.9%	24.7%	25.9%	24.7%	15.7%	16.7%	21.3%	0.702
OnceADay	25.6%	30.9%	30.9%	23.4%	30.1%	21.2%	34.7%	
SeveralTimesAWeek	26.8%	18.5%	11.1%	15.6%	18.1%	16.7%	12.0%	
OnceAWeek	14.6%	14.8%	16.0%	18.2%	20.5%	19.7%	13.3%	
LessThanOnceAWeek	8.54%	7.41%	11.1%	10.4%	9.64%	18.2%	9.33%	
Never	8.54%	3.70%	4.94%	7.79%	6.02%	7.58%	9.33%	
Satisfaction from life (mean and standard deviation)	3.54 (0.65)	3.58 (0.71)	3.77 (0.54)	3.72 (0.60)	3.73 (0.50)	3.74 (0.44)	3.75 (0.44)	0.093
Relavance – risk perception (mean and standard deviation)	2.51 (1.10)	2.66 (1.09)	2.58 (1.09)	2.44 (1.01)	2.64 (1.09)	2.50 (1.11)	2.61 (1.02)	0.850
Tendency to trust people (mean and standard deviation)	2.88 (0.53)	2.80 (0.58)	2.89 (0.59)	2.86 (0.56)	2.82 (0.57)	2.87 (0.54)	2.87 (0.45)	0.946

A.7. First study: planned contrasts design

	No regulation	**State regulation based on pledges**	**C&C state regulation**	**Control group**	*Sum*
Contrast 1 No regulation vs regulation	-2	1	1	0	0
Contrast 2 State regulation (based on pledges) vs C&C state regulation	-1	0	1	0	0

A.8. Second study: planned contrasts design

	Group 1	**Group 2**	**Group 3**	**Group 4**	**Group 5**	**Group 6**	**Group 7**	*Sum*
Contrast 1 State regulation VS self regulation	1	1	1	1	1	1	-6	0
Contrast 2 Enforcement VS no enforcment	1	1	1	1	1	-5	0	0
Contrast 3 Multiple tools VS Two tools	0	1	1	1	-3	0	0	0
Contrast 4 Pledges plus other tool VS Pledges only	3	-1	-1	-1	0	0	0	0

DISCUSSION AND CONCLUSIONS

The delegation of regulatory tasks to independent regulatory agencies poses a challenge to representative democracy due to their detachment from political control (Majone 1999; Vibert 2007). So far, the regulation scholarship has focused mainly on accountability as a remedy for this challenge, seeing accountability as a legitimacy increasing mechanism (e.g., Scott 2000; Maggetti 2010; Koop 2011; Brandsma and Schillemans 2013). However, if we depart from representative democracy to a more pluralistic view of democracy, it is possible to see that regulatory agencies employ different democratic qualities that reflect the sharing of power with various external actors, including transparency, participation, and representation (Thatcher & Stone Sweet 2002; Scott 2015). Contrary to accountability, these qualities have received far less academic attention. Moreover, these four democratic qualities have not yet been systematically measured or compared, and their contribution to public trust in regulatory agencies and in regulated market firms has not been explored.

This dissertation proposes to explore these democratically qualities holistically, to learn more about how agencies adhere and advance different democratic notions. Moreover, it suggests exploring the relative impact of each quality on public trust both in the agencies and in regulated companies, to learn about the potential positive impact of these qualities on the economy. To do so, the first paper develops indicators to quantitatively measure the democratic qualities of regulatory agencies, making it possible for the first time to collect data and compare them within agencies and across agencies in different countries and sectors, and ultimately to develop a theory of the democratic orientation of regulatory agencies. The second and third papers focuses on the relationship between regulation and trust, both in the context of Fintech regulation. The second paper examines the role of the democratic qualities of regulatory agencies in cultivating public trust in firms and in regulatory agencies, and the third paper examines the role of regulatory design in fostering public trust in firms.

Summary of the research project and work process

I started this project thinking about the role of the administration in democracies. Before I began my doctoral studies, I worked in the Israeli government as an advisor to the executive director of one of the ministries. In this position, I constantly witnessed the clash between the professional level, the civil servant managers, and the political level, the elected politician who was appointed minister of the office. Each side pushed to influence policy in the direction they saw fit, and both saw themselves as the legitimate protectors of the public interest. Who was the legitimate decision maker according to democratic theory? This question led me into academic research, and I began my doctoral studies examining the concept of democratic legitimacy of administration and trying to figure how to maintain modern states' need for a professional and strong public service which still follows democratic values – allowing the public to influence policy. I read philosophical, historical, legal, political science, and the (surprisingly) few public administration scholars who addressed this question before me. What I quickly discovered was that democratic expectations from the executive branch vary widely depending on how democracy itself is perceived. It was clear to me that there are various mechanisms in which the administration can operate to ensure that it enhances democracy.

The expansion of the regulatory state and the phenomenon of the agencification, which my PhD advisor Prof. David Levi-Faur introduced me to, stunned me as a case that further exacerbated the conflict between the need for effective governance and democratic theory (Levi-Faur 2005; Jordana, Levi-Faur & Fernandez-i-Marin 2011). While in ministries there is at least an elected minister who steers the policy, in independent agencies there is no one. Therefore, how independent bodies such as regulatory agencies can ensure democratic values in their procedures seemed to me to be the more pressing question, leading me to focus on these bodies in my research. Moreover, I hoped that the answers I find regarding regulatory agencies, as an extreme case, could then be applied to general public administration, perhaps with some adjustments.

Thus, in the **first paper** of the dissertation, I began to develop a framework for the democratic qualities of regulatory agencies. While I noticed that the regulation scholarship has focused primarily on accountability as the central quality studied with respect to the legitimacy of regulatory agencies (e.g., Scott 2000; Maggetti 2010; Koop 2011; Brandsma and Schillemans 2013), I also found that other scholars have begun to examine other qualities such as transparency, participation, and representation (or inclusiveness) (Thatcher & Stone Sweet 2002; Scott 2015; Arras and Braun 2018; Perez-Duran 2018; Pérez-Durán and Bravo-Laguna 2019). However, no quantitative measure of these qualities has yet been developed. Most of the measurements focused on accountability only, and some of them were extended to include transparency or participation which were seen as indicators of accountability (cf. Jordana et al. 2018). This meant that it was impossible to quantitatively assess and compare the extent of which agencies are transparent, accountable, representative or enable participation. I identified a need to develop a comprehensive quantitative measure for both the formal and the *de-facto* democratic qualities, in a way that is sensitive to the type of actors that the agency shares power to. It was especially important for me to distinguish between sharing power with the political sphere, with stakeholders and regulatees, and with the wide public. My idea was that such a measure will allow to construct databases with empirical data on these qualities that can serve the academic community as a basis for exploring hypotheses to explain differences among agencies and possible drivers and effects, and to develop a theory on democratic regulatory governance.

To develop such a measure, it was first necessary to redefine the four qualities so that they were conceptually separate to avoid overlap (Mulgan 2000). Then, I reviewed previous measures to incorporate existing indicators into the newly defined concepts. Finally, I conducted an in-depth qualitative analysis of six agencies to identify more indicators of the qualities and to ensure that the measures were sensitive enough to grasp the various rich ways agencies work. The diverse case selection strategy was chosen to ensure the indicators developed could be and generalized and used across agencies from different countries and sectors. These efforts resulted in 58 indicators to measure both the formal and the *de-facto* transparency, participation, accountability, and representation of regulatory agencies.

In the **second paper,** I decided to explore the relationship between democratic qualities and the trust of the public in regulatory agencies and in regulated bodies. At that time, there was very little literature on this topic. The existing literature relied mainly on qualitative, case-based methods and focused on bilateral trust relationships in the regulatory regime triangle (regulator-regulator, regulator-public, etc.) (Six & Verhoest 2017) or studies that focused only on the relationship between transparency and trust in regulators (Grimmelikhuijsen et al. 2021). Other studies focused on trust in general public organizations and practices of open governance, and not on regulatory agencies in particular (Kim and Lee 2012; Ingrams, Kaufman, and Jacobs 2020; Schmidthuber, Ingrams, and Hilgers 2020).

The purpose of the second paper was then to examine whether the democratic qualities of regulators increase trust in regulators and whether this trust extends to regulated firms. The reason I was interested in this in-direct relationship was because I was interested to learn whether the democraticness of public bodies matters not only for normative and legitimacy issues, but if it can have actual effect on citizens behavior. This paper asks whether the democratic qualities of regulatory agency, including transparency, participation, inclusiveness, and accountability, increase trust in regulated firms. In other words, do these qualities of regulators also play a role in trust in regulated firms and willingness to use new products. Moreover, I asked whether this effect is mediated by higher trust in the regulator. To answer this, I employed a large experimental survey, focusing on Fintech regulation. I chose the Fintech sector as the focus of my study because it is a market that poses privacy risks to the public and is hence suitable to explore issues of trust. In addition, to reduce potential covariates, I preferred to focus on a sector that is relatively new and where citizens have no prior knowledge of regulation and cannot rely on the existing reputation of firms to make trust decisions.

I designed a survey in which the respondents read about different democratic qualities of the regulator of Fintech companies, or in one group, about a regulator with all four qualities and then measured their trust levels toward the regulator and the company. The findings show that, contrary to my expectations, individual democratic qualities of the regulatory agency do not increase trust in regulatory agencies. Neither transparency, participation nor accountability or inclusiveness increased trust in the regulator. Only when the regulatory agency was described to have all four qualities, trust in the regulatory agency was increased significantly. However, when it comes to trust in the firm, inclusiveness does have a significant positive effect, and so does having all qualities.

The effect of all democratic qualities on trust in the company was found to be mediated by trust in the regulatory agency. This confirm that citizens rely on regulatory agencies' democratic qualities in their operational decision to trust and use new technologies and corroborates the findings from the second study, on the importance of the regulator in cultivating trust in market actors. However, inclusiveness of the regulator affects trust in the firm directly, not through increasing trust in the regulator.

In the **third paper**, I was interested to deepen my understanding of the role that regulatory agencies and regulation in general have on public trust in companies. Given the puzzling results of the second paper, it was necessary to unravel the way in which regulation affects the way people trust new technologies.

To answer this question, I designed, with two co-authors Yuval Feldman and David Levi-Faur, two experimental surveys that manipulated the existence of regulation and the regulatory design. We hypothesized that regulation by the state, and self-regulation with several tools or with enforcement tools, will increase trust in regulated companies given the reduction in the perception of risk that these tools create. We theorized that regulation has a 'third-party trust enabler role' and that people really need the state to be involved to feel confident to use risky Fintech products.

The results of the studies confirmed the important role of state regulation and regulatory agencies in developing trust in firms, in the context of Fintech regulation and in Israel. We found that for people to trust new technologies, command-and-control regulation is more effective than self-regulation designs, including with intermediaries. The results of this study establish empirically that there is a strong dependent of the markets on regulation for trust and introduction of new technologies. At least in Israel and in the Fintech sector, we now know that state regulation is necessary, and that a democratic state regulator can increase the willingness of people to trust new companies.

Summary of findings

The work in the **first paper** resulted in 58 indicators that can quantitively assess the extent to which regulatory agencies have democratic qualities: 22 to measure transparency, 12 to measure accountability, 12 to measure participation, and 12 to measure representation. These indicators enable to assess the formal obligations for different democratic qualities, by analyzing the legal frameworks of the agencies, and to assess the extent to which agencies carry out these practices *de-facto*, by analyzing agencies' websites and through other data-collection methods such as interviews with agency officials. In this paper, I conceptually separated previously overlapped qualities and their associated indicators, to enable the construction of a comprehensive measure of transparency, accountability, participation and representation in regulatory agencies, and later to compare them and learn about the dynamics of increasing these qualities. The indicators developed in this paper increase the sensitivity of previous measures, which tend to focus on single or very few elements. Hence, the suggested indicators allow to capture the full range of activities that regulatory agencies undertake with respect to these qualities and to grasp the extent to which agencies perform these practices voluntarily.

The findings of the **second paper** show that democratic qualities do increase trust in the regulatory agencies. However, only when the regulator has several qualities a significant effect can be determined. This implies that democratic qualities are important for trusting regulatory agencies, but that if regulatory agencies want to enjoy higher public trust, they should increase transparency, accountability, participation, and inclusiveness altogether. Emphasizing just one is not enough for increasing public trust. The findings also show that trust in the regulator is positively correlated with trust in the regulated company. This supports previous studies' conclusions that citizens rely on regulatory agencies in the decision to trust firms and new and risky new technologies (Sønderskov & Dinesen 2016). Regarding mediation hypothesis, the paper finds that the effect of 'all democratic qualities' on trust in the company was fully mediated via trust in the regulatory agency. However, a direct effect of inclusiveness on trust in the business has been determined. This means that reading about an inclusive regulator, that employs minorities and aims for gender equality, increases trust in the business without increasing trust in the regulator.

The findings of the **third paper** show that the existence of regulation is a positive determinant of public trust in companies, particularly in the Fintech sector. Moreover, this paper shows that state-regulation leads to higher levels of public trust in firms comparing to self-regulation designs. This paper also finds that in self-regulatory regimes, the possibility of sanctions in case of violations increases public trust, comparing to when there is no such possibility. In addition, and as expected, a traditional state regulatory design involving Command-and-Control leads to higher levels of trust in market entities than a looser design of state regulation based on pledges. These findings suggest a public preference for greater government oversight and functional economic benefits of government regulation, as respondents were willing to trust the market entity more when the state regulator oversees the market. However, the results of our interaction analysis suggest that under conditions of pledge-based regulation, public trust in the market could be enhanced, even more than C&C, when there is a high degree of trust in the regulator itself.

Contributions of the dissertation

This study has several important contributions. First, it facilitates the empirical assessment of the phenomenon of regulatory agencies employing democratic qualities by developing indicators that measure both the mandatory and *de facto* levels of accountability, transparency, participation, and representation. The indicators I developed allow for a systematic collection of data that can enable us to compare within and across agencies and assess the extent to which regulatory agencies are moving to a more pluralistic form, opening up, and becoming more responsive, comparing to remaining within the majoritarian perspective of democracy. This kind of data opens up opportunities to explore new research questions, advance theories of public policy, and advance the study of regulatory governance. These questions include the voluntary scope of democratic practices, tradeoffs between democratic qualities, the relationship between the degree of independence and democratic qualities, and the drivers and effects of democratic qualities. This dissertation already made an impact in this direction, since the indicators have been used to create a dataset on the democratic qualities of 47 regulatory agencies in nine countries and three regulatory sectors as part of the TiGRE project (Maman et al. 2021).

Scholarship on public administration more broadly can also gain insights from measuring democratic qualities if future work examines the suitability of indicators for non-independent administrative organizations such as ministries. Another outcome of my work in this dissertation is the development of the Measure of Democratic Qualities of Government Organizations in Israel (CECI, 2022), in which I contributed as an advisor, and which was strongly influenced by the indicators I developed in Paper #1.

Second, this dissertation contributes to examining the relationship between regulation and public trust, which enhances our understanding of how important trustworthy regulators are to public trust in market actors. Maintaining a government regulator and ensuring public trust in it is a critical element for trust in companies, at least in the context of Fintech. This is a contribution to ongoing debates about regulation, which often include criticisms of the regulatory state and calls for deregulation. This dissertation shows that regulation is indeed beneficial for firms in terms of public trust. From this perspective, the assumption that less regulation is always better for business is over inclusive and undertheorized. In many contexts where public knowledge about the integrity and competence of market actors is limited, such as in the open banking and the Fintech sector, more regulation can mean more trust in the market and is therefore better for markets. Moreover, this implies that the ability of governments to move to a less punitive approach to regulation and to use "smart regulation" tools depends on the ability of the public to trust the regulator. This suggests that a possible entry point into the 'virtuous circle of trust' lies in the hands of regulators and their ability to gain the public's trust in them. Punitive state- regulation, while a safe, risk-free way to maintain public trust in companies, is an ongoing act of distrust in them.

Another important contribution relates to companies themselves. It is clear from this dissertation that many of the enhanced self-regulatory systems that rely on intermediaries do not achieve satisfactory levels of public trust. This is an important finding that contributes to the literature on intermediaries, which is still in its early stages (Abbot, Levi-Faur & Snidal 2017). One possible explanation could be that many of the intermediaries operate under the radar of the public. Companies should prioritize communicating the transparency and independence of intermediaries in their field, as it would be in their interest to foster public trust in such mechanisms.

Finally, by examining the relationship between the democratic qualities of regulators and trust, this dissertation contributes to the literature by confirming that the move toward greater responsiveness and democratic qualities in regulators are not only normatively important, to increase democratic legitimacy, but also have a positive impact on enabling and promoting economic growth by increasing trust in new technologies. While some scholars question whether greater responsiveness to diverse stakeholders increases legitimacy or undermines the legitimacy of regulators, which has long rested on their independence and expertise (Koop & Lodge 2020), this dissertation shows that becoming more democratic, and sharing more power to the public, especially when incorporating diverse qualities rather than just one, has a positive effect on trust in companies.

To summarize, this dissertation calls for academic attention to the democratic qualities of regulatory agencies as a multidimensional concept that can shed light on how these bodies distribute power at different levels and to different actors, thus contributing to different democratic values. It enables the empirical assessment of these qualities by offering indicators and highlights, building on experimental studies, that regulatory agencies should increase their democratic qualities, and their trustworthiness, to ensure the optimization of the economy and market.

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תקציר

מחקר זה עוסק באיכויות הדמוקרטיות של רשויות רגולטוריות. איכויות דמוקרטיות מוגדרות כהליכים שבאמצעותם רשויות משתפות ומכלילות שחקנים חיצוניים בקבלת ההחלטות. איכויות אלו משקפות רעיונות דמוקרטיים מסוגים שונים בהתאם לסוג השחקנים המוכללים על ידי הרשות. הספרות המחקרית העוסקת ברגולציה התמקדה עד כה בעיקר **באחריותיות**, איכות שמשקפת את ערך הדמוקרטיה הייצוגית, המכוונת לכך שקבלת ההחלטות במנהל הציבורי תישאר, או לפחות תפוקח ותשלט, על ידי הדרג הנבחר. עבודה זו מציבה לצד זאת איכויות דמוקרטיות נוספות שמקיימות רשויות רגולטוריות, כגון **שקיפות, השתתפות וייצוגיות**, איכויות המשקפות רעיון פלורליסטי יותר של דמוקרטיה, הקוראת להכללת מגוון רחב יותר של שחקנים בקבלת ההחלטות, ובעיקר את הציבור הרחב. עד כה, איכויות אלו קיבלו תשומת לב מועטה בספרות והן לא נמדדו באופן שמאפשר להשוות את המידה שבה רשויות מאופיינות באיכויות כאלו או אחרות. כמו כן, הספרות המחקרית טרם פנתה לבחון את המידה שבה איכויות דמוקרטיות של רשויות רגולטוריות תורמות לפיתוח אמון ציבורי בחברות מפוקחות וברשויות עצמן.

עבודת הדוקטורט הזו נכתבה כאסופה של שלושה מאמרים. **המאמר הראשון**, *"האיכויות הדמוקרטיות של סוכנויות רגולטוריות"*, עוסק בהמשגה ובפיתוח אינדיקטורים למדידה של שקיפות, אחריותיות, השתתפות וייצוגיות של רשויות רגולטוריות. מדדים אלו מאפשרים לאמוד ולהשוות את המידה שבה רשויות רגולציה מאופיינות באיכויות דמוקרטיות שונות, הן מתוקף מחויבות חוקית, והן באופן שבו הן מתנהלות בפועל. **המאמר השני**, *"האם האיכויות הדמוקרטיות של רגולטורים מגדילות את הנכונות לתת אמון בחברות?"* מתבסס על סקר ניסוי אינטרנטי שנערך בהקשר של מוצרי פינטק, הבוחן את תפקידן של האיכויות הדמוקרטיות של רשויות רגולטוריות בטיפוח אמון הציבור בחברות פינטק וברשויות רגולטוריות. **המאמר השלישי**, *"מגוון משטרי רגולציה והשפעתם על אמון הציבור בחברות"*, בוחן את תפקידה של סגנון הרגולציה בקידום אמון הציבור בחברות ועסקים באמצעות שני סקרי ניסוי אינטרנטיים בהקשר של מוצרי פינטק. בפרט, מאמר זה בוחן את היכולת של משטרי רגולציה עצמית ושל מתווכים רגולטוריים להבטיח את אמון הציבור בשירותי פינטק, בהשוואה לרגולציה מדינתית מסוג "ציווי ושליטה".

במבוא לעבודה זו מתוארת בעיית המחקר אותה אני מזהה כאתגר אותו מציב המנהל הציבורי לדמוקרטיה, בעיה הנובעת מהכוח הרב המופקד בידיהן של רשויות המנהל הציבורי ומשיקול הדעת הניתן לדרג הפקידותי. בעיה זו, הנקראת גם בשם החסך הדמוקרטי, מתעצמת במקרה של רשויות רגולטוריות, בשל העצמאות אשר לרוב מאפיינת אותן, שמייצרת ניתוק מהדרג הנבחר. האצלת סמכויות רגולטוריות (קביעת תקנות, פיקוח ואכיפה) לרשויות רגולטוריות עצמאיות נהייתה לנוהג מקובל בממשלות רבות בעולם

לפחות מאז שנות ה-80. עם זאת, תופעה זו עוררה מחלוקת מתמשכת בדבר הלגיטימיות הדמוקרטית של גופים אלו. כפתרון אפשרי לבעיה זו, עבודת הדוקטורט הזו מציעה להתמקד באיכויות הדמוקרטיות של רשויות רגולציה, אשר מבטיחות את קיומו של עקרון הדמוקרטי של שלטון העם, באמצעות שיתוף הכוח המנהלי עם הציבור, עם בעלי עניין או עם נבחרי הציבור. **במאמר הראשון,** המתבסס על מחקר איכותני מעמיק אודות שש רשויות ממדינות וענפים שונים, פיתחתי 58 אינדיקטורים למדידת שקיפות, אחריותיות, השתתפות וייצוגיות של רשויות רגולטוריות. אינדיקטורים אלו מאפשרים, לראשונה, למדוד ולהשוות באופן שיטתי את המידה שבה רשויות מחויבות על פי חוק לפעול בהתאם לאיכויות השונות, ואת המידה שבה הן פועלות בפועל לקידומן. כבר כיום, משמשים אינדיקטורים אלו חוקרים נוספים לצורך איסוף מידע על ההתנהלות הדמוקרטית של רשויות רגולציה[1] ורשויות מנהל[2].

עבודה זו מזהה ועוסקת בבעיה נוספת, החוסר בידע מחקרי אודות השפעתן של איכויות דמוקרטיות של רשויות רגולטוריות על אמון הציבור. הספרות כבר ביססה שאמון בארגונים ציבוריים הינו רצוי מבחינה נורמטיבית מכיוון שהוא משקף את הלגיטימיות של הממשלה. אמון בארגונים ציבוריים נמצא גם כאמצעי שתורם להשגת תוצאות רצויות אחרות, כגון ציות ושביעות רצון. בעוד שהספרות החלה לחקור את תפקידן של איכויות אינדיבידואליות על אמון בארגונים ציבוריים, ההשפעה ההשוואתית שלהן או ההשפעה שלהן בהקשר של רגולציה כמעט לא נחקרה. בפרט, לאמון ברשויות הרגולציה עשויה להיות תוצאה חיובית נוספת: הוא יכול להוביל לאמון רב יותר בחברות ועסקים המפוקחים ובכך לקדם שגשוג כלכלי. עם זאת, עדיין לא ברור האם שקיפות, אחריותיות, ייצוגיות והשתתפות בקרב רשויות רגולציה מגבירות את האמון הציבורי ברשויות רגולציה ובחברות המפוקחות.

מסיבות אלו בחרתי במאמר השני והשלישי, תוך עריכת סדרה של סקרי ניסוי, לבחון את ההשפעה של רשויות רגולטוריות, סגנון הרגולציה, ואיכויותיהן הדמוקרטיות על אמון הציבור ברגולטורים ובחברות. **במאמר השני** מצאתי כי איכויות דמוקרטיות אינדיבידואליות אינן מספיקות כדי להבטיח אמון בחברות מפוקחות וגם לא ברשות הרגולטורית עצמה. רק במקרה בו רשות רגולטורית תוארה כבעלת כל ארבע התכונות, אמון הציבור גדל במידה מספקת. עם זאת, ייצוגיות נמצאה כמספיקה כדי להגביר את האמון בחברה, למרות שאיכות זו לא הספיקה כדי להגביר את האמון ברשות עצמה.

במאמר השלישי, מחקרי העלה כי אמון הציבור בחברות תלוי בקיומה של רשות רגולטורית ממשלתית. רגולציה עצמית, גם כזו הכוללת מתווכים רגולטוריים שונים, איננה מניבה את אותו רמת אמון

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[1] פרוייקט TiGRE של הוריזון 2020 אסף מידע על למעלה מ-45 רשויות רגולציה בהתבסס על המדדים שפיתחתי (ראו https://www.tigre-project.eu/).
[2] מדד הממשלה של המרכז להעצמת האזרח, פותח בהשראת הרעיון שמציעה עבודת דוקטורט זו ומתבסס במידה משמעותית על האינדיקטורים אשר פיתחתי (ראו https://madad-ceci.org.il/) .

בחברה המפוקחת. כמו כן, מצאתי כי היכולת של רשויות רגולציה להקל על הנטל הרגולטורי ולהסתמך על הצהרות של החברות המפוקחות כי הן מצייתות לרגולציה, מבלי שהדבר יפגע באמון הציבור בחברות המפוקחות, תלויה ברמת האמון הציבורי כלפי רשויות הרגולציה.

לעבודת דוקטורט זו מספר תרומות חשובות. **ראשית**, היא קוראת לראשונה להסב את תשומת הלב המחקרית לאיכויות הדמוקרטיות של רשויות רגולטוריות על מנת להאיר את האופן שבו גופים אלה משתפים שחקנים שונים בקבלת ההחלטות ובעיצוב המדיניות, ובכך משקפים רעיונות דמוקרטיים. הבנה זו יכולה לתת מענה לספקות שמועלים עשורים רבים, ביחס למידת הלגיטימיות של רשויות בעלות עצמאות פוליטית. **שנית**, עבודה זו מאפשרת לראשונה למדוד באופן אמפירי וכמותני את המידה שבה רשויות רגולטוריות במדינות וסקטורים שונים מחויבות במסגרת החוק לקיום איכויות דמוקרטיות ואת המידה שבה רשויות מקיימות איכויות דמוקרטיות מסוגים שונים בפועל. **שלישית**, המדד שפותח בעבודה זו, בהתאמות מסוימות, יכול גם לשמש למדידת האיכויות הדמוקרטיות של רשויות מנהל ציבורי כלליים, כגון משרדי ממשלה, ובכך לשמש ככלי מחקרי אך גם ככלי מדיניות בפני עצמו, אשר מתמרץ גופי ממשל להגביר את האיכויות הדמוקרטיות שלהן באמצעות תחרות. **רביעית**, עבודה זו תורמת להבנת האופנים בהם רשויות רגולטוריות ורגולציה בכלל, חשובים לאופטימיזציה של השוק באמצעות הגדלת הנכונות של הציבור לתת אמון בעסקים ובטכנולוגיות חדשניות. **חמישית**, מחקר זה תורם לספרות בכך שהוא מאשש כי איכויות דמוקרטיות של רשויות רגולטוריות חשובות לא רק מבחינה נורמטיבית, לשיקוף של ערכים דמוקרטיים, אלא גם בהשפעתן החיובית על אמון הציבור בגופי שוק. מחקר זה מוצא ביסוס אמפירי לכך שעל ידי הגברת האמון בטכנולוגיות מתפתחות, כמו במקרה של הפינטק, לאיכויות דמוקרטיות של רשויות רגולציה ישנה חשיבות כלכלית – הגברת נכונות של הציבור לבטוח בטכנולוגיות חדשניות ובכך להגביר צמיחה.

עבודה זו נכתבה בהדרכתו של פרופסור דוד לוי פאור.

האיכויות הדמוקרטיות של רשויות רגולטוריות ואמון הציבור

חיבור לשם קבלת תואר דוקטור לפילוסופיה

מאת ליבי ממן

הוגש לסנט האוניברסיטה העברית בירושלים

ספטמבר 2022