Data Protection Gatekeepers post-GDPR:
A fuzzy-set qualitative comparative analysis (fsQCA) across data protection authorities

ABSTRACT

This study explores the divergence in data protection enforcement strategies among national agencies. Whereas the literature on cross-national enforcement practices is scarce, this paper develops a scale for enforcement strategies, and measures and compares enforcement choices across agencies. Based on survey responses from 18 DPAs, interviews, and secondary sources, this study clusters DPAs based on enforcement strategies, analyzes cross-national variations, and investigates misalignments between strategy and actions. Using fsQCA, this study tests how bureaucratic and political contexts – organizational capacities, budget sources, and issue saliency – impact enforcement choices. Almost half of studied agencies reflect highly deterrent strategy, but for many, lack of resources and expertise inhibits the translation of strategy into practice. This study provides a starting point for understanding the national impacts of Europeanization post-GDPR, adds empirical support for theorizing about enforcement across the EU, and shows how privacy gatekeepers are far from being equipped for their mission.

1 - Introduction

The impact of Europeanization on national enforcement agencies is far from clear. Research that captures practical enforcement at the agency level is scarce, with most empirical studies analyzing the enforcement style of inspectors rather than the strategy of agencies (e.g. Bastings et al. 2017; Hartlapp, 2014). Explanatory factors for practical enforcement are blurry as well. Studies on regulatory variations usually rely on high-level explanatory contexts such as culture, state traditions, or market structures (e.g. van Waarden, 1995; Vogel, 2011) that are detached from day-to-day enforcement decisions. The question of whether there is, in fact, a pan-European enforcement style across national agencies deserves closer attention.

National data protection agencies, post-GDPR, are an attractive target for investigation in light of these gaps. One of the purposes of the new European data protection regime was to create a more strict and 'European' enforcement approach across member states. Armed with significant investigative and sanctioning powers and with responsibility across a large scope of companies, Data Protection Authorities (DPAs) are motivated to deter regulatees in order to establish a culture of compliance. But to what extent they will give up their 'national identity?' Therefore, this paper asks how enforcement strategies vary across DPAs, post-GDPR, and how these variations can be explained?

To answer these questions, this study builds on early works from the enforcement literature that define enforcement strategy as a bundle of discrete choices made by agencies regarding what to monitor and supervise and how to enforce the law (Scholz, 1994; May & Burby, 1998). Measurement of DPAs' enforcement strategies, specifically deterrence strategies (Scholz, 1994), was conducted by adapting existing scales that differentiate between monitoring and sanctioning in the enforcement process (Liu

et al., 2018) to the data protection case. Based on sixteen interviews with current and former DPA employees, enforcement choices throughout the enforcement process have emerged across two dimensions: (1) breadth of monitoring & supervision efforts and (2) level of coercion in sanctioning efforts. A survey was designed based on these dimensions, and responses from 18 DPAs were collected, along with secondary sources on GDPR evaluation and implementation aspects. DPAs were clustered based on their enforcement strategy and analyzed based on strategy variations and link between enforcement strategies and actions. Using Fuzzy Set Qualitative Comparative Analysis (fsQCA), the paper investigates patterns in cross-national enforcement strategies and misalignment between strategies and actions by considering the bureaucratic (organizational capacities & budget sources) and political (issue saliency) contexts of the enforcement process.

Capturing variations in enforcement strategies enables the uncovering of different national approaches to data protection enforcement and various misalignments between strategy and actions. Almost half of the studied agencies are classified medium-high on both dimensions, reflecting high deterrence in their enforcement approach. Sufficient resources and high levels of expertise are associated with wide monitoring & supervision strategies for some. Surprisingly, this is not a necessary condition for casting a broad supervision net. Agencies with insufficient resources and low levels of expertise follow a similar strategy. For them, however, lack of resources is associated with complete disagreements between strategy and action. Whereas the resources crisis among DPAs has been receiving much attention, this study shows how for some, resources can be sufficient for choosing to apply wide monitoring & supervision practices, while for others, resources prevent the expression of enforcement strategy through actions. The bureaucratic context of enforcement also matters when considering DPAs' budget sources, that are found to be associated with a different type of misalignment between strategy and actions. Soft strategy turns to high amounts of investigations and fines when there is a link between fines collected and budget sources.

In the context of this special issue, implications of this study are relevant for our understanding of EU readiness to the age of artificial intelligence (AI). Since personal information is often fundamental to AI systems that predict and classify users' behaviour, data protection is a central component in the 'European approach' to AI governance (EU Commission, 2018 & 2019 & 2020). Twelve DPAs published guidance and strategy documents on how to apply data protection principles to AI projects (Kress et al., 2020), without 'losing sight of the benefits such projects can deliver' (ICO, 2020, p.2). A new term has emerged: 'data protection-compliant AI,' with the purpose of preparing data protection officers (DPOs) of AI-based corporations to the age of AI governance. The EU is getting prepared for the age of AI governance and DPAs' enforcement strategies are critical components for any European governance effort.

More broadly, this research adds empirical support for theorizing about agency enforcement. It provides a starting point for understanding the impacts of Europeanization on national enforcement strategies post-GDPR, highlights the importance of the bureaucratic context to national enforcement,

and calls for a better understanding of the misalignments between strategy and actions among DPAs. Probing how and why DPAs' enforcement strategies diverge, this study aims to take us one step further in measuring and explaining variations in national enforcement across the Union.

2 - Europeanization of Agency-level Enforcement?

The debate over the implications of Europeanization on national enforcement has quite a long tradition in comparative public administration research. On the one hand, many law and policy scholars argue for divergence in national enforcement styles across Europe, but provide rather abstract explanations in the form of domestic institutions or state and legal traditions that are expected to block the spreading of a unified European enforcement style among national regulatory agencies (e.g. Richardson, 1982; Freeman, 1985; Feick and Jann, 1988; Howlett, 1991; van Waarden, 1995; Legrand, 1996; Kagan, 1997; Versluis, 2003; Painter and Peters, 2010). On the other hand, several scholars tried to challenge this argument by conceptualizing and labeling a distinct European regulatory style – "Eurolegalism" – arguing that economic liberalization and principle-agent tensions in EU governance have led to convergence in member states toward an adversarial and legalistic regulatory style, gradually eroding national styles (Kelemen, 2011; See also Kelemen, 2006; Vogel, 2003 and 2011). According to the Eurolegalism theory, an agency's enforcement strategy, as a subset of the thicker concept of 'regulatory style,' is expected to be stringent and hierarchical. Making a case for Eurolegalism, Kelemen (2011) adds an important caveat by acknowledging national "institutional and cultural walls" that might affect the spread of adversarial legalism in the EU, creating variations in regulatory styles among member states (p. 32). Nonetheless, Kelemen (2011) argues, these variations might soften the overall adversarial approach in comparison to the American one, but a unified and adversarial EU regulatory tone is expected to prevail across the Union over time (p. 239). The expectation is that EU directives will bring processes of formalization through uniform rules and obligatory procedures that were not there before, possibly impacting existing forms of national enforcement. The question is to what extent there is, in fact, a pan-European enforcement style? Do we see agencies' enforcement styles becoming more similar in Europe?

Existing works associated with this debate leave us with several gaps to fulfill. First, research comparing the practical aspects of enforcement of European legislation across several member states is very scarce (see a survey of the literature by Wiering and Havinga, 2021). Most of this literature is occupied with studies of formal rather than practical accounts of policy implementation. Scholars have been analyzing the transposition of EU laws or organizational structures of agencies (e.g. Holzinger et al., 2008; Hammit et al., 2013; Strunz et al., 2018), with barely a few revolving around practical enforcement choices. Borraz et al. (2020) address the same issue, arguing that "comparative studies of Europeanization tend to focus on formal disclosure and decisions and to disregard implementation" (p. 1). Instead of capturing "the law in action," many scholars assess what regulatory systems aspire to

achieve without looking beyond formal decisions to consider how regulation is enforced. The very few comparative studies that did assess enforcement in practical terms (e.g. Borraz et al., 2020; Bastings et al., 2017; Versluis, 2007) found that although uniformity in institutional structure existed, enforcement styles varied considerably (Wiering and Havinga, 2021).

Second and probably related, there was hardly a measurement of enforcement styles at the agency level. To study the impact of Europeanization on national enforcement, we need to coherently capture agency's enforcement as the dependent variable, but the literature offers limited scales to do so. The underlying structure of the concept was conceptualized and measured based on the interactions of field inspectors with regulatees, relating to the 'street-level' behaviors of inspectors vis-a-vis those they regulate (May and Winter, 2000). Most contemporary literature on enforcement is centered around the work of individual inspectors (e.g. Bastings et al., 2017; Liu et al., 2018; de Boer, 2019), but the term 'enforcement style' has been used interchangeably to refer to behaviors by both inspectors and agencies (Braithwaite et al., 1987; Hutter, 1989; McAllister, 2010). It is unclear whether the concept of enforcement style can be relevant to agencies, inspectors, or both. In thinking about enforcement, May and Burby (1998) argue, scholars easily move from inspectors to agencies and vice versa.

Agency-level enforcement, however, is very different from street-level enforcement. Agencies are less likely to develop significant relationships with their regulatees or have a certain attitude toward the regulated, which can differ depending on the situation at hand. They do not visit the 'field,' are less integrated into the population of target companies than what inspectors might be, have less autonomy when enforcing the rules, and less discretionary room to behave as they see fit during regulatory encounters. Thus, 'field-level' discretion in the enforcement process is less present at agency-level enforcement decisions (Scholz, 1994; May and Winter, 2011).

A few scholars did distinguish between agency enforcement and inspectors' enforcement, creating the foundations for properly separating and measuring the two (e.g. Scholz, 1994; May and Burby, 1998). May and Winter (2011) distinguish between choices made by regulatory agencies and label those 'enforcement strategies' and the day-to-day dealing of inspectors with regulatees, which they label as 'enforcement style.' Their definition of 'enforcement strategy,' which is embraced here, is that enforcement strategy is constructed by the enforcement choices made by regulatory agencies. Those include decisions regarding what to enforce, how to allocate resources for inspections, and what enforcement tools to emphasize. It is a mix of different practices that the agency chooses to pursue (May and Burby, 1998). Scholz (1994) was one of the early scholars who tried to provide alternative strategies for agencies' enforcement, going beyond the coercive power of deterrence. He presented distinctions in agency strategies among 'deterrent,' 'educational,' and 'persuasive' approaches and argued that an agency's enforcement strategy is a separable concept from the enforcement style of inspectors. Agencies can deter, educate, or persuade regulatees in order to create a culture of compliance, and each of these goals has a different strategy and method. Still, as also pointed out by May and Winter (2011), the broad categories of agency enforcement strategies suggested by the

literature (Reiss, 1984; Braithwaite et al., 1987; Hutter, 1989; Scholz, 1994), are "too simplistic to adequately reflect reality." (p. 238)

Third, explanations for variations in enforcement strategies that go beyond macro variables such as market structure, or state culture and traditions, are scarce in the literature. Kelemen's (2011) macro mechanisms of economic liberalization and political fragmentation in the EU seem disconnected from day-to-day enforcement choices by an agency. Other scholars of regulatory variation in the EU also point to rather abstract variables, not going beyond traditional clusters of European states – Scandinavian; Anglo-American; Napoleonic; Germanic (Bayerlein et al. 2020 describe the problem. For an example of this trend see Peters, 2020).

Nevertheless, by considering micro- or meso level explanations of EU policy enforcement, new paths for explaining variations in practical enforcement across the EU might emerge. Adam and Hurka (2020) have recently described this gap, pointing to the tradition of focusing on the politics that underlie policymaking (and implementation) processes. The relatively stable policy styles at the macro level, they argue, have not found great empirical support (p. 362). This trend does not fully acknowledge, for instance, the growing literature on variations in the institutional design of regulatory agencies and the bureaucratic context of enforcement decisions (e.g., Gilardi, 2002; Koop, 2014; Jordana et al., 2018). Nor does it consider the level of politicization of policy issues and the influence of issue saliency on agency choices (e.g., Lee et al. 2009).

Early studies on agency enforcement strategies do take into account the bureaucratic and political contexts of agency's enforcement choices (e.g. Hutter, 1989; Bardach and Kagan, 1982). These works provide a starting point for deriving hypotheses to explain agency's enforcement choices in ways that are closer to agency's operations. Hypotheses for variations in DPAs' enforcement strategies are derived in section 2.2 from those early works.

2.1 – The Case of Data Protection

The EU' data protection regime, post-GDPR, is an appealing policy field to examine in light of these gaps in the literature. The GDPR was designed to make enforcement strict and more 'European,' resolving the fragmented nature of prior data privacy laws embedded in different national systems (Daigle and Khan, 2020; Rijpma, 2020). DPAs' task even includes an obligation to contribute to a harmonized and effective level of data protection within their wider territory of the Union (GDPR Article 51(2)). Still, the impact of recent Europeanization on data protection enforcement across member states remains unclear. Certain DPAs seemed reluctant to coercively enforce the GDPR over significant violations of the law (Vinocur, 2019), whereas others posed unprecedented fines on tech companies (DLA Piper, 2021), demonstrating how privacy enforcement might be a rather selective process among DPAs.

These apparently different trends in DPAs' enforcement are especially surprising as many of the facilitating factors for convergence toward high-deterrence enforcement strategies are present: (a) The information age has led to a quantitative explosion in regulated entities under DPAs' oversight, creating a need for deterrence via strict enforcement to establish a culture of compliance (Voss and Bouthinon-Dumas, 2021; Hijmans, 2018; BIgnami, 2011. But see Hodges, 2015); (b) European institutions, mainly the European Data Protection Board (EDPB), push for convergence in national enforcement styles to "level the playing field" (Hijmans, 2016a) and ultimately enhance the effectiveness of the EU Charter rights to data protection and privacy (Rijpma, 2020); (c) The GDPR has empowered DPAs to an unprecedented degree, gearing them to strict enforcement actions (Articles 57 & 58(2)) and vesting them with the authority to pose significant administrative fines (Article 83); (d) The GDPR is a very detailed and specific text, describing precisely the tasks DPAs are required to fulfill while leaving little room for national law (Hijmans, 2016a); and (e) the issue of data protection draws enormous attention in the EU among media outlets, policymakers, and the public (e.g. Rossi, 2018), making it likely for enforcers to adopt a strict strategy under the public pressure (Hutter and Manning, 1990).

While we can witness some of the features of "Eurolegalism" in the GDPR, such as the introduction of private right of action (Article 77), or the overall increase in sanctions over time (Bignami, 2011; DLA Piper 2021), we are still unable to carefully expand Kelemen's (2011) theory of Eurolegalism beyond its judicial dimension to the domain of national enforcement strategies. As Hijmans (2016b, p.9) nicely summarized, the European dimension of DPAs has become more dominant, but it is still unclear whether and to what extent DPAs might give up their national identity. This begs the questions: how enforcement strategies post-GDPR vary across DPAs? And how can we explain different data protection enforcement strategies across member states?

Previous studies on DPAs as independent administrative agencies have uncovered some of DPAs' roles and influence throughout the three stages of the data protection policy cycle – (1) initiation, (2) formulation[1] and (3) enforcement (e.g. Bignami, 2011; Daigle and Khan, 2020; Righettini, 2011). Those who addressed DPAs' enforcement have nonetheless been mainly investigating the formal rather than the practical aspects and provided abstract explanations for DPAs' enforcement styles. Examples include Bignami's (2011) comprehensive comparative account of DPAs' regulatory styles. She tested Kelemen's (2011) argument by studying four DPAs – France, Germany, UK, and Italy – concluding that convergence in regulatory styles certainty takes place, but toward what she labeled as 'cooperative-legalism:' though, punitive administrative enforcement coupled with public pressure on industry actors

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[1] Addressing DPAs' role in policy initiation and formulation that led to the 1995 Data Protection Directive, Newman (2008) described the impact of the French and German DPA in pushing the data protection issue up to the supranational agenda of the EU, formulating the fundamentals of the 1995 Data Protection Directive (but also see Bignami, 2005, who questions DPAs' influence on that directive). Bignami (2011) also explained policy formulation of the 1995 Directive, mentioning how policy diffusion was able to push self-regulatory industry practice, but not the diffusion of the registration system.

to self-regulate, with low levels of litigation and courts' intervention in the policy process. Applying a 30-year perspective, Bignami (2011) found that convergence in regulatory styles of DPAs moved agencies away from licensing and registration and toward tough administrative enforcement of government standards and self-regulatory techniques. For each inspected DPA, Bignami (2011) showed how administrative powers and agency independence had formally increased, and so did the number of inspections and fines and the extent to which self-regulatory practices were encouraged. Righettini (2011) followed the same trend, comparing the French and Italian DPAs while considering the formal arrangements whereby these agencies have been institutionalized and how these formal structures affected their policy styles. Righettini (2011) found a decisive role for agencies' leadership in changing the regulatory agenda despite the different legal traditions in the two nations. Daigle & Kahn (2020) and Tiliute (2020) provided more recent and practical accounts of DPAs' enforcement. Both studies used the frequency and amount of administrative fines as proxies for DPAs' enforcement styles. Daigle and Kahn (2020) found that some of the core European countries – Germany, UK, France, and Italy - were the most active enforcers of GDPR based on the total amount of fines posed. They showed different trends between Eastern and Western European countries in imposing fines, both in the total sum of fines and the size and nature of the companies held accountable. Still, that proxy for comparing agencies' enforcement styles might be misleading. The type and quantity of GPDR violations might vary across nations, questioning our ability to jump to conclusions based on the frequency of fines posed. These works did not explain DPAs enforcement trends, providing a partial understanding of post-GDPR enforcement styles. Instead, this paper aims to look at the practical enforcement choices, post-GDPR, that form various data protection enforcement strategies across member states.

2.2 – *Variations in DPAs' Enforcement Strategies*

Similarities and differences between enforcement strategies will be explained based on the bureaucratic and political contexts of data protection enforcement by national agencies. Still, the hypotheses below are best thought of as analytic propositions that specify expected patterns of enforcement strategies, rather than statements of precise causal relationships. As such, the analysis seeks to assess how data about the agency's enforcement decisions match the hypothesized patterns.

First, and maybe one of the most common bureaucratic context explanations about the (lack) of effective GDPR enforcement relates to the capacities of DPAs. Organizational capacity is usually reduced by these arguments to budget and expertise. The agency enforcement literature argues that sanctioning and investigation processes cost time and can only be achieved when there are enough resources (Hawkins, 1984). Hutter (1989) suggests that organizational resources, reflected by budget and staff members, are central to agency's ability to cast a wide supervision net. With regards to agency's sanctioning approach, the impact of resources can be bidirectional. Lack of resources might pressure an agency to employ a legalistic approach since it cannot adequately deal with the problem. At

the same time, sanctioning may be costly, leading agencies with insufficient resources to avoid legal action. But when considering the deterrent effects of sanctions, Hutter (1989) concludes, posing sanctions might end up being cost-effective.[2]

In the data protection case, it has long been argued that DPAs suffer from scarce resources in ways that constrain their operations (e.g. EU Agency of Fundamental Right, 2010; EDPB, 2020).[3] The GDPR specifically addressed resources and distinguished between adequate human, technical and financial resources, premise, and infrastructure. Member states ought to ensure that adequate resources are provided, without indicating how the adequacy of the resources can be measured (Article 52(4)). But given the scarcity of resources, DPAs need to be strategic about how they use their funds and which cases to investigate (Hijmans, 2016a). In addition, the lack of resources is conceived of as preventing DPAs from completing investigation processes in a reasonable timeframe. With a significant increase in the demand for DPAs' services post-GDPR (Rijpma, 2020), the organizational capacity of DPAs to meet such demand remains questionable. Hence, the scarcity of resources at DPAs makes pro-active investigations or the expansion in the scope of complaints less likely, narrowing the scope of supervision and impacting the agency's sanctioning approach (Hutter, 1989).

A vital aspect of DPAs' organizational capacity is the efficacy of their technical expertise. The available resources of DPAs should ensure effective policy enforcement and assessed not only quantitatively, but also qualitatively, based on technical expertise and the professional background of staff members (Hijmans, 2016a, p. 368). Even though expertise gaps were not a trigger for EU data protection reform, such expertise may provide legitimacy for state agencies to act in complex technological environments. Thus, greater levels of expertise are expected to encourage both DPAs' monitoring and sanctioning efforts.

Variations in technical expertise and organizational capacity across DPAs seem significant. Based on testimonies from DPA representatives, Raab and Szekely (2017) found that the level of technical expertise among DPAs is not satisfactory. A recent report found that half of the DPAs have less than five tech specialists on board, concluding they have no capacity to comprehend and enforce GDPR in rather sophisticated technological scenarios (Brave, 2020). Still, several DPAs do not see technical expertise as a problematic gap. The Information Commissioner's Office (ICO) in the UK, for instance, stated in a recent EDPB questionnaire that it had enough resources to fulfill its mission (ICO, 2019). Thus, variations in budget and technical expertise are hypothesized to lead to variations among DPAs' supervision and sanctioning choices.

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[2] Scholz (1994) also considers organizational resources central to enforcement strategies, although he is more interested in the efficiency of enforcement rather than the drivers for certain types of enforcement.

[3] The Article 29 Working Party even proposed to include a quantitative formula in the GDPR to guarantee sufficient resources for DPAs in each member state based on population size (Article 29 Working Party Opinion 01/2012).

The operationalization of this hypothesis was done by reducing organizational capacity to: (1) Self-reflection by DPAs on whether they have sufficient resources to fulfill their mission. (2) The number of technical experts on DPA's staff. For cases where technical expertise is also outsourced (e.g. Austria, Belgium, Cyprus, and Latvia), one full-time technical expert was added to the DPA's permanent technical staff.[4] Absolute rather than relative numbers of tech experts were chosen as proxies for DPAs' expertise since this hypothesis aims to capture an agency's overall level of expertise, regardless of its size. Small agencies with only two experts on board (e.g. Iceland or Cyprus) do not hold more expertise than very large agencies with dozens of experts (e.g. UK or Poland), even though the percentage of tech experts out of total staff in small agencies is greater (See Table 3).

H1: High levels of financial and technical resources are expected to encourage greater monitoring & supervision and can impact DPAs' coercion levels in both ways.

Second, the political context of the data protection issue, addressed by the level of the saliency of the issue, is also expected to lead to cross-national variations in enforcement strategies. According to the enforcement literature, a salient issue stands high on the political agenda and is likely to influence enforcement and compliance practices by receiving much more attention in its enforcement phase, leading to greater sanctioning and supervision efforts (Baldwin, 1990; Kagan, 1989; Knill, 1998). The political context of enforcement, defined by Hutter (1989) as the 'degree of public awareness and concern about regulatory problems' (p. 165), was found to be a central driver for agency's enforcement choices. The extent to which enforcement work of agencies attracts media publicity is expected to influence the sanctioning choices of the agency. According to Bardach and Kagan (1982), regulatory agencies are influenced by political and media considerations, using coercive enforcement tactics to cope with public allegations against agency's behavior. Hutter and Manning (1990) further describe the 'moral panic' that an issue might cause, leading to a stricter enforcement approach: "Moral panic can create a climate in which extraordinary measures are called for and become acceptable." (p. 108 – captured from Versluis, 2003). The saliency of the data protection then is expected to impact the level of coercion applied by the enforcement agency.

Post-GDPR, data protection issues have been attracting public attention, especially following privacy scandals like the 2018 Facebook – Cambridge Analytica scandal or the unprecedented fines posed by the French Data Protection (the 'CNIL') on Google. Still, in some member states, data protection appears to be more salient than in others. The varying roles and significance of DPAs under the 'one-stop-shop' mechanism suggest that there are likely variations in data protection saliency across

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[4] This assumption is based on conversations with DPAs' representatives that highlighted how outsourcing expertise is for specific efforts and can be equivalent to no more than four experts working continuously for three months over the course of a year.

member states. The GDPR's "one-stop-shop" mechanism was already found to be imbalanced, shifting the administration of complaints to the locations of companies under investigation and creating different levels of weight and importance among DPAs (BEUC, 2020). The expectation is that the saliency of data protection issues will vary among nations, leading to variations in the level of strictness of DPAs' enforcement strategies.

The operationalization of issue saliency was done by considering the annual average of the overall number of news articles that addressed data protection over the past five years in each member state. This operationalization is based on the assumption that policy issues considered more important also receive more attention. The top four major newspapers in each member state were examined based on data from the Nexis Uni database (the successor to LexisNaxis Academic).[5] The number of articles that mention issues related to data protection per year was recorded by using "data protection" in different languages as search keywords in the database. As detailed in Table 3, the measure is based on the average number of references to data protection per year, for five years, between 2016 and 2020 (inclusive).

H2: Greater levels of data protection saliency across member states are expected to lead to higher levels of coercion in DPAs' enforcement strategies.

Third, another important bureaucratic context for enforcement strategies is the level of budget autonomy among DPAs. While GDPR's Articles 52 & 53 aim to ensure DPAs' administrative separation and protection from political influence,[6] budget autonomy might vary among the agencies. DPAs are funded mainly by public budgets, with member states not obligated to grant them a separate budget (Hijmans, 2016a). Some need budget approval or are required to allow budget auditing, while others control their budget entirely. Thus, for some, the budget is a public state budget, detached from a government ministry. For others, budgetary sources might be linked to fines collected or mandatory fees posed on market actors. Budget autonomy is a subset of the features that constitute agency's independence (see Jordana et al., 2018), and its effect on enforcement strategies remains to be seen.

The overarching issue of DPAs' independence has been discussed by courts and scholars since the inception of those agencies. DPAs were initially created to hold governments accountable (Flaherty, 1989; Bignami, 2011), and keeping them independent at all levels was fundamental for their operation. The importance of DPAs' independence was also on the agenda during GDPR negotiations (Hijmans,

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[5] Accessed was granted through Cornell University. For Cyprus, Latvia, and Slovenia, only three media sources were available. For Iceland, only two.

[6] One of GDPR's purposes was to shield DPAs from politicians undermining their independence, including aspects of Commissioners' appointments that should take place transparently by elected officials (Article 52). In addition, there should be no overlap in personnel between governments and DPAs, as it could lead to direct influence on the latter (Bieker, 2017), nor should there be any influence on DPAs by 'expert groups' at the national level.

2016a). The Commission was eager to establish a 'consistency mechanism' that would ensure consistent and uniform application of the regulation within the EU, however, it was pushed back by the Article 29 Working Party, who called for using the mechanism 'only when necessary' and in ways that do not undermine the independence of national DPAs (Article 29 Working Party Opinion 01/2012). The envisioned 'consistency mechanism' ended up being a conflict-resolution mechanism, instead of a more immediate threat on DPAs' independence.

Hence, while separation from political influence is 'coded' in the GDPR, budget autonomy and, more specifically, budget sources may vary. A link between budget sources and fines collected is expected to encourage supervision, monitoring, and sanctioning among DPAs.

The operationalization of this hypothesis was done by asking DPA employees specific questions on agencies' institutional features regarding budget autonomy and sources (indicators adopted from Jordana et al., 2018). The expectation is that attaching budgetary sources to fines would encourage monitoring and sanctioning practices.

H3: Links between fines collected and budget sources are expected to positively impact DPAs' monitoring and sanctioning choices.

3 – Measuring the 'Deterrence' Strategy of DPAs

To capture DPAs' enforcement strategies, this study builds on Scholz (1994), May & Burby (1998), and May & Winter's (2011) definition of enforcement strategy, as the choices made by regulatory agencies regarding what to monitor and how to enforce the law. May and Burby (1998) suggest a useful way to operationalize an agency's enforcement strategy, arguing that it is a mix of different practices that the agency chooses to pursue. They perceive strategy as a bundle of discrete choices concerning inspection and imposition of sanctions. The suggested measurement scale below focuses on the fundamental tasks of an enforcement agency – monitoring and sanctioning – that constitutes the agency's 'deterrence strategy' (Hawkins, 1984; Scholz, 1994).

Deterrence strategy is a type of an enforcement strategy that uses coercive means to create a culture of compliance. Basic tactics of this strategy include monitoring efforts to detect non-compliance and sanctions posing sufficient to deter future non-compliance. Whereas alternative enforcement strategies that emphasize educational and persuasion efforts are also applied by agencies, they can only be developed after a credible deterrence threat has been established (Scholz, 1994). Thus, the measurement effort below aims to understand the most basic enforcement strategy applied by DPAs and provide the grounds for future enforcement studies in this space.

Enforcement style is commonly understood across two dimensions - 'formalism' and 'coercion.' This two-dimensional nature of enforcement style has become widely accepted, even though the concept was conceptualized based on the relations between inspectors and regulatees. In the data protection case, slightly different dimensions are required to capture agency's enforcement choices. Liu et al. (2018) provide a helpful distinction between monitoring and sanctioning during the enforcement process, as two functions that are often carried out by different parts of an enforcement agency. This is our starting point for understanding the different enforcement choices of an agency across its monitoring, supervision, and sanctioning efforts. The first dimension suggested here, *breadth of monitoring & supervision*, refers to the activities by the agency to detect non-compliance, including monitoring compliance and investigating an alleged violation but excludes any instance of dealing with observed non-compliant behavior (Scholten, 2017). Breadth of monitoring & supervision can be narrow or wide, reflecting on the scope and nature of those practices by the agencies. The second dimension, *level of coercion*, refers to the sanctioning approach of the agency vis-à-vis the regulated. The level of coercion can be low or high, reflecting how quickly and strictly the agency poses sanctions on market actors (May and Winter, 2000).

Enforcement choices by the agency for each of these two dimensions constitute the agency's deterrence strategy. In the DPA case, those enforcement choices were extrapolated based on an analysis of sixteen interviews with current and former DPA employees and experts in the field (see Appendix #1). Several enforcement choices by DPAs within the enforcement process have emerged, illustrating how DPAs decide on the (1) breadth of monitoring & supervision efforts and (2) levels of coercion in their sanctioning efforts (see Table 2 for items). Enforcement action is likely to begin with a complaint, leaving room for DPAs to adopt their own complaint-handling process: (i) DPAs can choose a 'selective-to-be-effective' approach and refrain from handling all complaints. (ii) DPAs can also decide to accept complaints only from those data subjects inflicted by the apparent violation rather than any interested party. This can shape the circumstances under which DPAs potentially start an enforcement process. Next, DPAs also design their own regularities in the investigation/inspection process. (iii) They can choose to be pro-active and start investigations based on their own initiatives or work only upon complaints submitted to them; (iv) They can also choose to expand investigation as they see fit beyond the boundaries of the complaint in question. These four items capture the breadth of monitoring & supervision that DPAs choose to adopt in the enforcement process, ranging from narrow to wide, constituting one dimension of DPAs' enforcement strategies. In their sanctioning approach, DPAs have ample room for steering as well. (i) They can give a second or third chance to companies before issuing a fine; (ii) decide to officially issue a warning before posing a fine to ensure they exercise their powers by the principle of proportionality; (iii) apply a soft approach in a pre-defined, initial, GDPR implementation phase; and (iv) engage in naming and shaming by publishing the names of data controllers under investigation during or after an enforcement decision was finalized. By the publicity of enforcement actions, DPAs hope to increase their deterrence effect on other market actors not subject

to penalties, showing that agencies are serious about enforcing the law. These four items capture the level of coercion that DPAs choose to adopt in their enforcement process, ranging from low to high, constituting the second dimension of DPAs' enforcement strategies.

This typology enables the comparing of different enforcement strategies among DPAs. Instead of selecting specific DPAs to study, this paper aims to capture enforcement choices by as many DPAs as possible and investigate how and why their enforcement habits differ. After reaching out to 31 national DPAs and 16 regional DPAs within Germany, eighteen complete responses were received, with a response rate of 55% among national DPAs and an overall of 37.5% when adding regional DPAs (see survey questions in Appendix #2). Seventeen responses were recorded from national DPAs and one response from a regional DPA in Hamburg, Germany. Survey data were coupled with reports on GDPR implementation from the European Data Protection Law Review's "GDPR Implementation Series," the 2-year GDPR evaluation questionnaire conducted by EDPB, and the questionnaire conducted by the International Federation for European Law (FIDE) on data protection in the EU in 2020 (see Rijpma, 2020). Table 2 presents the classification of enforcement strategy items based on the collected data. The questions that were asked were framed as yes/no questions to rank enforcement strategy dimensions, equally weighted, on an ordinal scale. In figure 1 below, each DPA was classified according to its breadth of monitoring & supervision and level of coercion in the enforcement process.
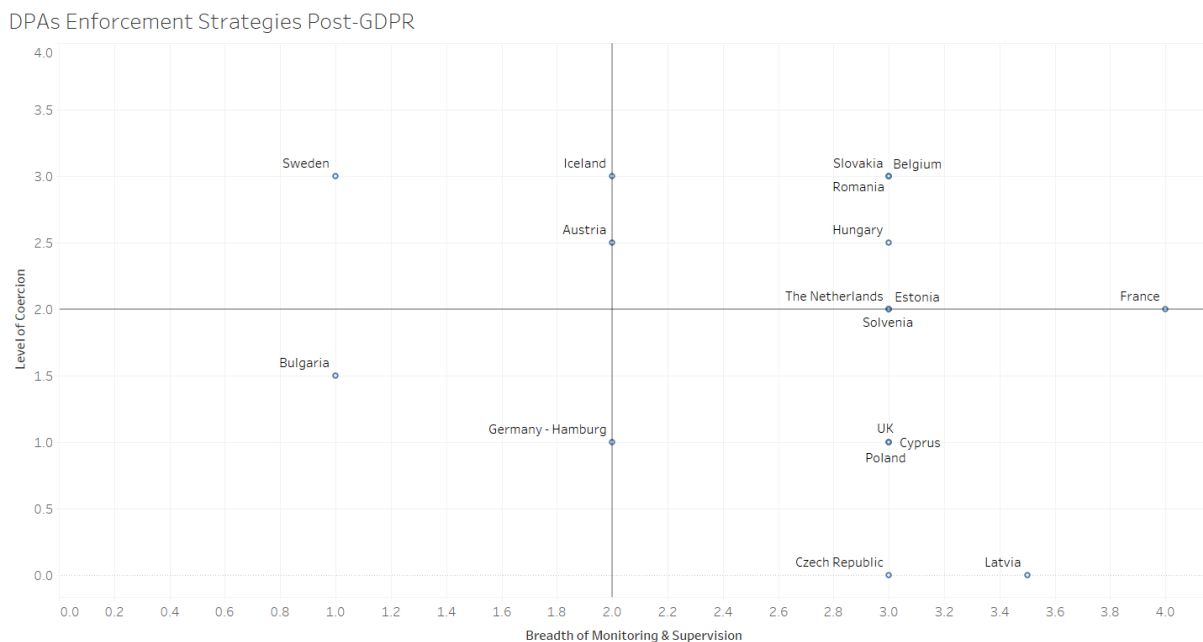
Figure 1: Eighteen DPAs classified based on their deterrence strategy via the dimensions of coercion and breadth of monitoring & supervision. The line in each axis is the mid-range value in that axis.

As figure 1 demonstrates, 10 out of 18 (55%) DPAs are positioned medium or high on both dimensions, reflecting a strategy of high deterrence. Also, three clusters of enforcement strategies are emerging,

with a few outliers: (i) Iceland and Austria ranked medium on supervision efforts and high on coercion levels, while (ii) Latvia, UK, Cyprus, Poland, and the Czech Republic represent an opposite deterrence strategy – high on supervision efforts but low on coercion. (iii) The third cluster, comprising Slovenia, Estonia, the Netherlands, Slovakia, Belgium, Romania and Hungary, are DPAs that cast a wide net in their monitoring efforts and medium-high levels of coercion in their sanctioning approach. Sweden, Bulgaria, the German DPA in Hamburg, and France are outliers who cannot be easily clustered to any of the groups.

DPAs are spread across the different dimensions of enforcement strategy, emphasizing the extent to which DPAs diverge in their deterrence strategy for data protection enforcement. Still, the fact that the majority of DPAs (55%) are classified at medium-high levels in both dimensions and reflected as deploying a high 'deterrence strategy' might signal that convergence toward strict enforcement is emerging. This trend, however, does not come together with the lack of compliance culture in data protection across Europe (DLA Piper, 2021) or the recent accounts about DPAs' enforcement activities that perceive Eastern-European DPAs as weak and soft (Diagle & Kahn, 2020). The next measurement step, then, compares enforcement strategies with enforcement actions, to understand to what extent the two align.

3.1 – Comparing between enforcement strategy and actions

An assessment of enforcement actions was conducted to compare DPAs' enforcement actions with observed strategy (see Table 1). Data were collected from 15 DPAs that responded to questions about the number of complaints received, investigations opened, and enforcement outputs produced (overall response rate of 32%, and 45% out of only national DPAs). Their answers were coupled with published annual reports and a 2-year evaluation of GDPR implementation conducted by the EDPB.

Focusing on the years 2019 and 2020,[7] in which the GDPR was already effective across most member states, the first dimension – '*tendency to investigate*' – is calculated by the percentage of investigations out of total number of complaints. Indeed, some DPAs open some of their investigations on their own initiative. In some cases, like for the Slovenian DPA, this can lead the 'tendency to investigate' percentage to be more than 100.[8] To ensure this measurement is comparable among DPAs, and not simply a function of DPAs' burden, a 'burden indicator' for each DPA was calculated based on the number of total employees divided by the number of total complaints in 2019 (see Table 1). This indicator was then correlated with the 'tendency to investigate' for each DPA, revealing a low

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[7] For the Belgian and Dutch DPAs, data were based on actions from the year of 2019. For the French DPA, the tendency to investigate was only based on data from the year 2019.

[8] since number of investigations reported does not distinguish between proactive investigations and commissioned ones.

correlation coefficient of 0.168. Thus, 'tendency to investigate' provides a way to compare DPAs' choices when it comes to opening an investigation that should potentially correspond with DPAs' breadth of monitoring & supervision strategy.

The second indicator for DPAs' enforcement actions is the '*tendency to fine,*' based on the percentage of fines imposed out of all enforcement outputs produced. This measure aims to capture the tendency of DPAs to fine rather than choose another enforcement tool such as: a warning, reprimand, an order-to-comply, or a processing ban when concluding a case. In figure 2 below, each DPA was classified according to its enforcement actions.
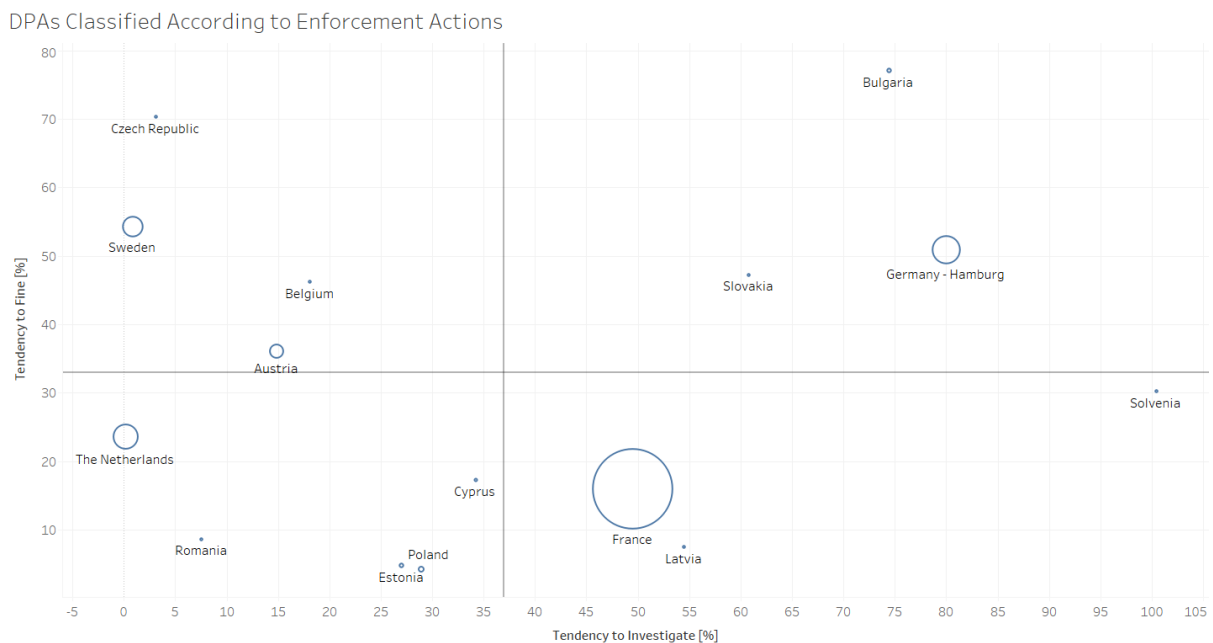

DPAs Classified According to Enforcement Actions

Figure 2: Fifteen DPAs classified based on their enforcement actions. The line in each axis is the average value in that axis, allowing to realize how each DPA actions stands in relation to average values. The size of each circle reflects the average size of fine posed by the agency.

Describing 'enforcement on the ground,' figure 2 shows three clusters that partially overlap: (1) Seven DPAs (The Netherlands, Romania, Cyprus, Estonia, Poland, France, and Latvia) demonstrate a low tendency to fine (23 percent or less), with two of them (France and Latvia) showing high tendency to investigate; (2) Six DPAs (Romania, the Netherlands, Austria, Belgium, Sweden, and the Czech Republic) show low tendency to investigate, with some of them demonstrating a high tendency to fine; and (3) Three DPAs (Slovakia, Bulgaria, Germany – Hamburg) exhibit high tendencies for both (around 50 percent or higher). Slovenia is an outlier with an extremely high tendency to investigate but an average tendency to fine.[9]

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[9] Figure 2 also provides information on variations in the average size of fine posed by each agency. On average, France poses much higher fines than all the rest, with Sweden and the DPAs in Hamburg, Germany, and the Netherlands following behind. This might be an attractive source for national comparison, but since the size of fines is specifically determined under GDPR (Articles 83 & 84), the choice for DPAs in

This is a strikingly different picture from the observed enforcement strategies of those DPAs. Most DPAs (9 out of 15) investigate third or less of their complaints, with the vast majority of DPAs (11 out of 15) use fines in less than 50 percent of their produced enforcement outputs. Thus, a gap between enforcement strategy and actions emerges and deserves a closer attention. Ideally, we would expect that DPAs' breadth of monitoring & supervision and tendency to investigate will match, or see a clear correlation between DPAs' levels of coercion and tendency to fine. For many DPAs, however, there is a remarkable divergence between strategy and action (e.g. The Czech Republic and Romania). This will be operationalized and evaluated in section 4.

Several considerations for differences between strategy and action should be taken into account. First, DPAs under a heavy burden might not be able to express their strategy through actions. While no correlation between our DPA burden indicator and tendency to investigate was found, DPAs in Netherlands and Romania that express low tendencies to investigate are indeed under a greater burden, 2-3 times more than all the others based on our indicator (see Table 1). Low tendency to investigate in those cases might indeed be due to unusual burden. Second, we are exposed to selection bias in the type of complaints DPAs deal with. Not all violations are equally distributed among DPAs, as some face more serious and significant cases than others. The selection bias is challenging to measure given the lack of data on the distribution of serious cases between DPAs, but this is still a factor to consider when comparing enforcement actions across agencies.

4 – fsQCA of Variations in DPAs' Enforcement Strategies and their Link to Actions

To explore the influence of organizational capacity, issue saliency, and DPAs' budget autonomy on the dimensions of enforcement strategies, this study utilizes the configurational approach of Fuzzy Set Qualitative Comparative Analysis (fsQCA) (Ragin, 2000 and 2008). This approach for data analysis was chosen for several reasons. First, with a small-medium size sample (N=18), but at the same time, a sample that includes half of national DPAs in Europe, fsQCA allows a systematic comparison between DPAs to explore, rather than validate, how bureaucratic and political contexts impact enforcement strategies. Second, due to data collection challenges and the inability to get intimate knowledge about each and every DPA, this study is exploratory in nature, applying a "condition-oriented" approach to cases by studying each DPA in terms of a well-defined set of conditions (Thomann and Maggetti, 2017). This allows to mainly recognize patterns across cases, which can install motivation and provide guidance for a follow-up in-depth qualitative treatment of each cluster of enforcement strategies. Indeed, set relations provided by fsQCA are not enough to postulate a cause, as the QCA algorithm

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this space is somewhat limited. The size of a fine is determined by the seriousness of the violation and is not subject to strategic decisions on how to conduct enforcement. At the same time, the tendency of DPAs to choose fines in the first place over other enforcement outputs is much more related to their strategic sanctioning approach, providing a better assessment for their actions.

only describes super- and subset relations in the data, rather than a full clarification of the mechanisms that explain why potentially causal relationships hold. Nor does the analysis provides the average effect size of the independent variables.

Still, in the state of current research on policy enforcement in general and DPAs' enforcement strategies in particular, an exploratory comparative approach across nations, that goes beyond generalizations derived from traditional administrative cultures and seeks to accentuate other potential mechanisms for practical enforcement approaches is well-suited for fsQCA features. Since each DPA potentially brings together a different set of attribute configurations, fsQCA enables (1) modeling the complexity of how independent variables might work together to influence enforcement (conjectural patterns); (2) disqualifying theories that are unable to correctly discriminate among cases; (3) considering different paths for similar enforcement styles (equifinality); and (4) establishing asymmetric set-relations that allow for different mechanisms to explain the presence or absence of a certain enforcement style (asymmetry) (See Thomann, 2020). Fuzzy over crisp sets was chosen for conditions and outcomes when possible. Conditions and outcomes can thus be either more or less included in a given set instead of a strict "yes" or "no" decision for each variable. This enables a more careful analysis and prevents the model from relying too heavily on thresholds set for each condition and outcome.

The first step of the fsQCA[10] was the calibration of conditions and outcomes to range from 0 to 1. With data on 18 DPAs, four possible conditions (and their negation) - Issue Saliency (S), Number of Technical Experts (TechS), Sufficiency of Resources (R), and Budgetary Autonomy via fines (BBOF)[11] were tested for each of the two dimensions of an agency's deterrence strategy – breadth of monitoring & supervision, and levels of coercion. In the second step of the analysis, divergence between enforcement strategy and enforcement actions was tested for as well. Overall, four conditions per outcome is in line with the benchmark for the number of conditions to use per 18 cases according to Marx and Dusa (2011). The calibration mechanism for all conditions and outcomes was based on Ragin's commonly applied idea of using the logistic function for calculating degree of membership (See more in Dusa, 2019, p.97).

Calibration of issue saliency values was defined based on the following: "low" values were assigned to jurisdictions with less than ten data-protection related articles on average per year. High values were assigned to jurisdictions with more than 200 data-protection related articles per year. The cross-over point was 52, allowing, on average, one data protection-related article per week. Any value more than that will get a nation closer to be included in the group of states with high saliency of data

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protection issues.[12] Calibration of the number of technical experts on DPAs' staff was done based on the assumption that low technical expertise is equivalent to having less than two IT experts on board. DPAs with more than 12 technical experts were considered DPAs with high expertise. The cross-over point was set to be 6 technical experts in a DPA's staff, which reflects medium-level of tech expertise. According to interviews with former DPA employees, having six full time tech experts on board enables DPAs to start and address more complex technical issues, shifting from the 'responsive' paradigm that most DPAs are currently applying due to lack of resources. The two dimensions of DPAs' enforcement strategy, breadth of monitoring & supervision and level of coercion, were calibrated based on their range (0-4 with the middle point as the crossover point). The calibration for measuring the divergence between enforcement strategy and actions was calculated based on calibrations of each dimension in enforcement strategy and enforcement actions measurements to fuzzy sets between 0 and 1: The two dimensions of enforcement strategy were calibrated as explained in the previous paragraph. "Tendency to investigate" and "tendency to fine" actions were calibrated based on 10 percent as low, 50 percent as the crossover point, and 75 percent as high. Divergence between strategy and action was labeled "high" when the summary of divergence between two pairs: (difference between the breadth of supervision & tendency to investigate) + (difference between the level of coercion & tendency to fine) was at least 1.0. Simply put, with a maximum possible absolute difference of 1.0 for each pair of dimensions (since values are between 0 to 1 in each dimension), DPA's strategy and actions diverge if the absolute difference in both dimensions is at least 1.0. This means that, on average, the difference between strategy and action is at least 0.5 in each dimension, half of the maximum possible, and high enough to reflect complete disagreement between strategy and actions.

A necessity analyses was conducted for all outcomes and their negation, applying the recommended consistency benchmark of ≥ 0.9 (Schneider and Wagemann, 2012), and also considering "Relevance for Necessity" (RoN) values ≥ 0.6, to see how important each condition is for the necessity of the outcome. None of the conditions came out necessary for any of the outcomes or their negation based on these thresholds. A sufficiency analysis was then conducted, using Ragin's (2008) truth table algorithm to identify combinations that are consistently linked to the outcome, applying a consistency benchmark of ≥ 0.8 (Ragin, 2006 and 2008) complemented by a proportional reduction in inconsistency (PRI) score benchmark of ≥ 0.65 to avoid simultaneous subset relations of conditions in both the outcome and its absence. Applying a conservative approach in order to avoid stretching the results too much, only configurations that cover the outcome by more than 50 percent were considered, to make sure each configuration presented here is explaining the majority of observed outcomes.

Table 4 presents the fsQCA results using Ragin and Fiss's (2008) notation. I report on the "complex" solution (i.e., applying a conservative approach to the minimization process, considering

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[12] The thresholds for calibration of issue saliency also ensures that Iceland, with very few overall articles related to data protection from only two available sources, is less likely to produce more than 10 articles per year with the hypothetical examination of two additional sources. Likewise, Cyprus, Latvia, and Slovenia, with three instead of four available sources to examine, are less likely, according to their numbers, to cross the mark of 52 articles on average, even if additional source would have been examined for those countries (see Table 3).

only observed positive cases) in all sufficiency analyses presented. Two outcome tests passed all the thresholds, leaving the dimension of coercion (or the negation of coercion) in DPAs' enforcement strategy unexplained by the model. The first outcome, wide breadth of monitoring & supervision, was tested for association with high levels of resources and expertise (H1) and with a link between budget sources and fines collected (H3). The outcome was found to be explained by two different types of configurations: In the first type, DPAs with a high number of technical experts that self-report on sufficient resources and do not base their budgets on fines collected (France, Poland, and the UK), chose to deploy a strategy of wide supervision (S1 in Table 4). Having the expertise at their disposal, these DPAs seek to address a broad range of complaints and open an investigation when opportunity arises. Surprisingly, there is an additional type of DPAs that choose to apply wide monitoring & supervision. These DPAs – Belgium, The Czech Republic, The Netherlands, Romania, and Slovakia - have a low number of technical experts and report on an overall lack of resources for their mission. Still, they choose to apply wide monitoring & supervision efforts in ways that seem disconnected from their organizational capacities (S2 in Table 4). This is a puzzling finding that goes against the hypothesized patterns in H1 and signals that some unmeasured factors lead DPAs to apply wide supervision.

The second outcome that passed all thresholds was the disconnection between DPAs' enforcement strategy and actions. Ideally, we would have expected to witness convergence between DPAs' breadth of supervision strategy and their tendency to investigate – as DPAs seek to handle more complaints while expanding investigations when possible and pro-actively starting to investigate on their own initiative, those efforts should correspond to their increasing tendency to investigate. Levels of coercion in DPAs' sanctioning approach and their tendency to fine should ideally match according to a similar logic – if DPAs' do not hesitate to fine and interact with data controllers in a stringent manner, their tendency to fine should arise correspondingly. Analysis of what leads to divergence between strategy and actions reveals two sets of DPAs and two different types of disagreements between the two. First, DPAs with insufficient resources and low amounts of expertise, with no link between budget sources and fines collected – Belgium, The Czech Republic, The Netherlands, Romania, and Slovakia – express a wide breadth of monitoring & supervision and/or high levels of coercion as a strategy, but they struggle to put it into practice across all the cases they are handling, showing a low tendency to fine and investigate (S3 in Table 4). On the other hand, lack of resources with a relatively high number of experts and, more importantly, an external motive to fine data controllers to increase own budget, is associated with a different type of discrepancy between strategy and actions (S4 in Table 4). For Bulgaria, narrow monitoring & supervision and low levels of coercion are surprisingly turning to the third highest tendency to investigate (74%) and the highest tendency to fine (77%). This is a puzzling finding – the Bulgarian DPA, which lacks resources and generally exhibits medium-low levels of supervision and coercion as its enforcement strategy, investigates and fines data controllers at very high levels. The external motivation for posing fines by this DPA is probably affecting its ability to go

above and beyond its strategy, even though the mechanism for this discrepancy between strategy and actions remains unclear and requires an in-depth case study of this DPA.

5 – Discussion

The first important finding of this paper is the capturing of variations in deterrence strategies and enforcement actions among DPAs, post-GDPR. By comparing agency-based enforcement choices across the dimensions of monitoring & supervision and level of coercion, various data protection enforcement strategies emerge, reflecting different clusters of national approaches to enforcement. Forty-five percent of the studied agencies are ranked medium-high on both dimensions, demonstrating a high emphasis on deterrence. Twenty-seven percent of the DPAs apply a wide monitoring & supervision strategy but low levels of coercion vis-à-vis the market, and ten percent apply a more limited supervision arm with medium-high levels of coercion. Comparing this spread to corresponding enforcement actions reveals a different picture. Thirty-three percent of the DPAs show a low tendency to fine and investigate, with 80 percent are ranked low in at least one of those dimensions. Strategy and actions do not align, and for some, the disagreement is significant. Looking back at works on data protection enforcement, we can conclude that Bignami's (2011) account on convergence in DPAs' regulatory styles has been updated: when it comes to their enforcement strategies, national divergence arises, but almost half of the agencies do adopt a strategy of high deterrence, confirming "Eurolegalism" expectations to some extent. It remains to be seen whether, over time, post-GPDR, the data protection regime will become truly European at the enforcement level.

The sufficient configurations of variables from the fsQCA process reveal four additional findings that underline promising paths for further exploring and understanding DPAs' enforcement strategies and their link actions. First, as expected, DPAs choose to cast a wide monitoring & supervision net when they perceive themselves as having sufficient resources and satisfying technical expertise levels. Those DPAs act pro-actively, do not hesitate to address a broad range of data protection issues and use their investigative powers when they can. While theoretically unsurprising, this is an important finding that empirically holds post-GDPR. There is a second conflicting pattern in the data for those agencies who chose wide supervision as a strategy. Those are DPAs that apply wide monitoring & supervision despite insufficient resources and technical expertise. The overarching resource crisis among DPAs did not prevent certain agencies from deploying a wide supervision strategy, in a complete conflict with expectations from the enforcement literature on the link between resources and supervision. Thus, a second important finding is that for this set of DPAs, there are probably unmeasured factors with regards to breadth of monitoring & supervision strategies that can better explain their enforcement choices, going beyond organizational capacities or politicization of the data protection issue in their jurisdictions.

The analysis of divergence between enforcement strategies and enforcement actions throws some light on this puzzle. A third important finding of this study is that this same set of five DPAs are unable to practically follow their strategy due to a lack of resources and expertise. Their enforcement actions are in complete disagreement with their strategies and provide a better reflection of their organizational capacities.[13] Instead of having their enforcement actions as a natural expression of their strategies, those DPAs struggle to translate strategy to action due to a lack of resources and expertise. The enforcement decisions that constitute the strategy of those five agencies are still puzzling, but their inability to follow their strategies in practice is unsurprisingly correlated with their resource constraints. The fourth finding of the analysis relates to an opposite type of disagreement between strategy and actions. For the Bulgarian DPA, a rather narrow monitoring and low coercion strategy turn in practice to very high tendencies to investigate and fine cases. This type of inconsistency between strategy and actions is only observed once in the data and for a DPA that uniquely relies on fines as a budget source. A closer examination of the enforcement choices of such agencies is required to better understand this pattern.

Overall, the bureaucratic context matters for applying wide supervision efforts and linking strategy to actions. Organizational capacities and technical expertise are sufficient (but not necessary!) for adopting wide monitoring & supervision habits. In addition, resources, expertise levels, and budget sources highlight inconsistencies in the expression of strategy through enforcement actions. The inability of agencies to put their deterrence strategy into practice is associated with their organizational capacity, while a rather soft strategy is surprisingly associated with significant supervision and sanctioning on the ground. The political context that was hypothesized to impact coercion levels was not found to be associated with enforcement patterns in the data. The data did not settle the conflicting directions of its hypothesized influence, leaving the question on the impact of politicization on data protection enforcement wide open.

6 – Conclusion

The scarcity of cross-national studies on agency enforcement across the EU presents gaps in understanding the impact of Europeanization on national enforcement. The EU data protection regime, recently further Europeanized 'on the books' through the GDPR, was selected for analysis by comparing enforcement strategies of national agencies and their link to enforcement outcomes. An updated measurement of agencies' deterrence strategy was introduced, building upon early works that diverge from the common conceptualization of the enforcement process based on the behavior of field inspectors and day-to-day interactions with regulatees (e.g. Winter & May, 2000; Bastings et al., 2017; de Boer, 2019). Instead, agencies' deterrence strategy, constituted by their breadth of monitoring &

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[13] Unlike the set of DPAs (France and Poland) that enjoy the capacities to apply wide monitoring & supervision efforts, and unsurprisingly, demonstrate a closer alignment between strategy and actions.

supervision and level of coercion in their sanctioning approach, was captured and compared in 18 DPAs across the EU. One contribution of this research then, is the introduction of an updated comparative framework for measuring enforcement strategies with agencies as units of analysis, adding empirical support for theorizing about agencies' enforcement, a common theme across early works in this space (Braithwaite et al. 1987; Hutter, 1989; Scholz, 1994).

The second contribution of this research is in providing a starting point for understanding the impacts of Europeanization on national enforcement strategies in the data protection case post-GDPR. Almost half of the studied agencies adopt a high-deterrence strategy of wide monitoring & supervision and high levels of coercion in their sanctioning approach. With a few outliers and two other clusters of less deterrent strategies, national divergence clearly arises, and it remains to be seen whether such divergence is eroding over time.

The third contribution of this research is highlighting the weak links between enforcement strategy and actions. In contrast to strategies of high deterrence, the vast majority of analyzed DPAs investigate less than a third of complaints received, or fine less than a third of cases that were fully processed. Some DPAs struggle to 'translate' strategy to actions, calling for a better understanding of the relations between strategy to actions in the data protection case.

A final contribution of the paper is to the understanding of the bureaucratic context for adopting wide monitoring & supervision as a strategy and for linking between enforcement strategies and actions. For one set of DPAs (France, Poland, UK), organizational capacities – resources and expertise, set the tone for applying a strategy of wide monitoring & supervision efforts. For a second set of DPAs (Belgium, The Czech-Republic, The Netherlands, Romania, and Slovakia), wide monitoring strategy is applied regardless of their insufficient organizational capacities. This puzzling strategy cannot be followed 'on the ground,' however, due to lack of resources. For those DPAs, lack of organizational capacities is associated with significant disagreement between strategy and actions. Budget sources are associated with a second type of disagreement between strategy and actions – a rather soft strategy is 'translated' to unusually high numbers of investigations and fines in the Bulgarian case.

Several methodological issues temper these findings. First, the response rate of DPAs could have been better. After persistent efforts to communicate with all national and regional DPAs in Europe in this past year, just 55% of national DPAs responded to the survey, in addition to one out of sixteen regional DPAs in Germany. Others have provided only partial responses or did not respond at all. From public agencies accountable to the public, this lack of cooperation and transparency about basic enforcement choices and actions is disturbing. Second, the reliance on self-reported data from DPAs may result in bias. Officials had to self-reflect on their resources' sufficiency and enforcement choices, adding to what is usually distributed to the public via annual reports. Third, the empirical analysis involves many measurement-related decisions, including chosen indicators, operationalization and calibration choices, and thresholds to be used for the analysis. The study carefully reports on the reasoning behind each decision, with all collected data and code used available in the attached tables

and footnotes. Fourth, the choice to employ survey research, as opposed to in-depth case study, entails an important tradeoff – the survey 'profiles' DPAs across several settings, taking a snapshot of their current status and practices to form the basis for cross-national comparison and for other analyses to follow. It does not capture variation over time or provide the contextual richness that case studies usually offer. Finally, the new European data protection regime is young. We are 3.5 years since the GDPR became effective, suggesting that this is just a starting point for better understanding post-GDPR enforcement. Recent astronomical fines on WhatsApp and Amazon from the DPAs of Ireland and Luxemburg,[14] that were perceived by the media as soft, demonstrate how dynamic this regime might be and how applying a temporal perspective is crucial for understanding its development.

Subject to these methodological caveats, the paper provides an empirical basis for clarifying concepts of agency enforcement, bridging the gap between strategic choices and actual practice, and providing a starting point for understanding the impacts of Europeanization on national data protection enforcement strategies. While much has been written by media and civil society about the danger of understaffing and underfinancing of DPAs, this study empirically shows how resources & expertise and the understanding of DPAs' budget sources matter for agencies' strategy and actions. Whereas forum shopping by data controllers was and still is a concern (e.g. Mclaughlin, 2016), the continuous trend of understaffed and under-financed DPAs hamper their deterrence, allowing data controllers to escape stringent enforcement, and more importantly, skip compliance. In the context of this special issue, this questions EU's readiness to the age of artificial intelligence, for which data protection is a key factor in balancing risks and benefits for EU citizens.

Future studies for addressing the full spectrum of enforcement strategies beyond deterrence, considering DPAs' educational and persuasive strategies, would provide a more complete picture of DPAs' enforcement approach. With the ultimate goal of creating a culture of compliance, the impact of the different enforcement strategies on actual compliance would be a welcoming addition to the literature. Also, there is another type of enforcement, civic enforcement via class action lawsuits, that is emerging in the data protection space. Studies on this enforcement practice would stress additional enforcement paths and styles among national courts (for an example, see Lomas, 2020).

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[14] The Irish DPA posed a 225 million Euros fine on WhatsApp (Facebook) and the DPA of Luxembourg posed a 746 million Euros fine on Amazon. These fines are not finalized yet.

Table 1 – DPAs' Enforcement Actions [2019-2020]

State	Complaints	Burden Indicator [total employees / total 2019 complaints]	Tendency to Investigate [% out of complaints]	Tendency to Fine [% out of enforcement actions]	Total Amount of Fines [Euros]	Average Amount of Fine [Euros]
Austria	3,705	0.022	14.90	36.05	2,2134,200	295,122
Belgium*	331	0.2	18.13	46.15	39,000	6,500
Bulgaria	2,280	0.05	74.43	77.14	3,186,975	23,607
Cyprus	751	0.05	34.22	17.27	482,700	11,225
Czech Republic	4,337	0.04	2.74	82.61	138,000	7,263
Estonia	1,310	0.03	27	4.80	300,548	17,679
France	27,722	0.016	49.52*	15.93	189,859,300	10,547,738
Germany Hamburg	5,351	0.02	80	50.91	35,000,000	1,250,000
Latvia	2,177	0.019	54.52	7.48	266,647	8,332
The Netherlands*	27,854	0.007	0.20	23.53	3,930,000	982,500
Poland**	6,442	0.03	28.97	4.17	971,265	42228
Romania	10,890	0.005	7.56	8.63	89,500	2,796
Slovakia	352	0.376	60.80	47.20	350,308	3468
Slovenia	2,381	0.04	100.42	30.18	N/A	N/A
Sweden	6,300	0.026	0.89	54.29	12,332,430	649075

*   based only on data from 2019

** based only on data from 2020

Table 2 – Enforcement Choices across DPAs

State	Supervision				Overall Score	Sanctioning				Overall Score
	Accepting complaints from everyone?	Has to deal with each and every complaint?	Conducting investigations pro-actively?	Expands investigation if needed?		Does not give 2nd chance before fine?	Does not issue a warning before fine?	No soft approach in initial implementation phase?	Naming & Shaming?	
Austria	-	+	+	-	2	0.5 sometimes	+	+	-	2.5
Belgium	+	-	+	+	3	+	+	0.5 sometimes	0.5 sometimes	3
Bulgaria	-	-	+	-	1	-	+	-	0.5 sometimes	1.5
Cyprus	-	-	+	+	2	-	-	-	+	1
Czech Republic	+	-	+	+	3	-	-	-	-	0
Estonia	+	-	+	+	3	-	+	-	+	2
France	+	+	+	+	4	-	+	+	-	2
Germany –Hamburg	-	+	-	+	2	-	0.5 sometimes	-	0.5 sometimes	1
Hungary	+	-	+	+	3	+	+	-	0.5	2.5
Iceland	-	+	+	-	2	+	+	-	+	3

Latvia	+	+	+	Only in serious cases	3.5	-	-	-	-	0
The Netherlands	+	-	+	+	3	-	+	-	+	2
Poland	-	+	+	+	3	-	0.5 sometimes	-	0.5 sometimes	1
Romania	+	-	+	+	3	+	+	-	+	3
Slovakia	+	-	+	+	3	+	+	+	-	3
Slovenia	+	-	+	+	3	+	+	-	-	2
Sweden	-	-	+	-	1	+	+	-	+	3
UK	+	-	+	+	3	-	-	-	+	1

Table 3 – Operationalization of the Independent Variables

	Organizational Capacity		Issue Saliency		Independence in Enforcement Decisions
State	Technical Experts out of Total Staff	Self-Reporting on Sufficient Resources	Media Sources	Average number of news articles related to data protection per year in the last five years	Budget Autonomy based on Fines?
Austria	2	1	Die Presse; Der Standard; APA - Austria Presse Agentur; Elektronik Praxis (industrial electronic magazine)	251.6	0
Belgium	5	0	Apache; The Krant van West-Vlaanderen; Knack; Vif/L'Express	49.2	0
Bulgaria	7	0	Kapital; 24 Chasa; Kapital Daily; Dnevnik World	16.25	1
Cyprus*	3	1	Cyprus Mail (Republic of Cyprus); Cyprus News Agency; Financial Mirror	26.8	0
Czech Republic	4	0	CTK National News Wire; NEWTON Industry Specialized Digest - Czech Republic; M-Brain Czech Republic News; The Prague Post	83.4	0
Estonia	1	1	Baltic News Service; M-Brain Estonia News; Intellinews - Baltic States Today; Baltic news in Russian - BNS	60.2	0
France	25	1	Ouest-France; lefigaro.fr; Les Echos; La Tribune	845	0
Germany – Hamburg	7	0	Süddeutsche Zeitung (inkl. Regionalausgaben); Rheinische Post; Mitteldeutsche Zeitung; Der Tagesspiegel	1314.8	1
Hungary	2	1	Hungarian Official News Digest; M-Brain Hungary News; Intellinews - Hungary Today; Intellinews - Hungary This Week	7.8	0
Iceland**	1	1	GlobeNewswire – Icelandic; News Bites – Nordic	0.4	0
Latvia*	2	1	LETA; The Baltic Times; M-Brain Latvia News	19.4	0
The Netherlands	4	0	Het Financieele Dagblad; NRC Handelsblad; de Volkskrant; De Telegraaf	102.8	0

Poland	11	1	Polish News Bulletin; Gazeta Wyborcza; Newsweek Polska (English); Forbes Polska (English); M-Brain Poland News	49.4	0
Romania	1	0	Capital.ro; M-Brain Romania News; Intellinews - Romania Today; Intellinews - Romania This Week	4.8	0
Slovakia	2	0	NEWTON Macroeconomy Specialized Digest – Slovakia; Slovak Spectator; NEWTON Companies Specialized Digest – Slovakia; Tasr (online)	46.8	1
Slovenia*	4	1	Intellinews - Slovenia Today; M-Brain Slovenia News; News Bites - Central and Eastern Europe: Slovenia	0.2	0
Sweden	3	1	Esmerk Sweden News; Business Wire Svenska (Sweden); GlobeNewswire – Swedish; GlobalAdSource (Swedish)	9.8	0
UK	22	1	The Times (London); The Guardian (London); The Daily Telegraph (London); The Daily Mail and Mail on Sunday (London)	1199.4	0

* Only three available media sources were investigated for this country.

** Only two available media sources were investigated for this country.

Table 4 – fsQCA Results

	Wide Supervision		Divergence Between Strategy & Actions	
	S1	S2	S3	S4
High Issue Saliency	-	-		ɸ
High Number of IT Experts	●	ɸ	ɸ	●
Self-Reporting on Sufficient Resources	●	ɸ	ɸ	ɸ
DPA Budget influenced by fines collected	ɸ		ɸ	●
Consistency	0.902	0.901	1	0.925
PRI	0.862	0.859	1	0.925
Raw Cov	0.249	0.355	0.546	0.103
Unique Cov	0.249	0.355	0.546	0.103
Cases of solution	France, Poland, UK	Belgium, Czech Republic, The Netherlands, Romania, Slovakia	Belgium, Czech Republic, The Netherlands, Romania	Bulgaria
Overall consistency	**0.902**		**0.987**	
Overall PRI	**0.860**		**0.987**	
Overall coverage	**0.604**		**0.65**	

● = core causal condition present; ɸ = core causal condition absent

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APPENDIX #1 – Interviews conducted for creating a data protection enforcement strategy scale

Current Organization of Interviewee	Number of Interviews
NGO	7
DPA	4
Academia	3
Media	2

APPENDIX #2 – Questionnaire sent to DPAs

1 – How many post-GDPR complaints have you received? If your system does not split between pre- and post-GDPR periods, maybe you can report the number of complaints per year for the years of 2016;2017;2018;2019;2020?

2 - How many post-GDPR warnings have you issued? If your system does not split between pre- and post-GDPR periods, maybe you can report the number of complaints per year for the years of 2016;2017;2018;2019;2020?

3 - How many post-GDPR reprimands have you issued? If your system does not split between pre- and post-GDPR periods, maybe you can report the number of complaints per year for the years of 2016;2017;2018;2019;2020?

4 - How many post-GDPR orders-to-comply have you issued? If your system does not split between pre- and post-GDPR periods, maybe you can report the number of complaints per year for the years of 2016;2017;2018;2019;2020?

5 - How many post-GDPR temporary or definitive processing bans have you issued? If your system does not split between pre- and post-GDPR periods, maybe you can report the number of complaints per year for the years of 2016;2017;2018;2019;2020?

6 - How many post-GDPR administrative fines have you issued? If your system does not split between pre- and post-GDPR periods, maybe you can report the number of complaints per year for the years of 2016;2017;2018;2019;2020?

7 - How many post-GDPR inspections have you conducted? If your system does not split between pre- and post-GDPR periods, maybe you can report the number of complaints per year for the years of 2016;2017;2018;2019;2020?

8 – Do you accept complaints only from affected data subjects or any other stakeholders who might have interest in the resolving of the case?

9 – Do you conduct inspections upon proactive initiative or solely based on complaints?

10 – Can you report on the average pace of the investigation process? How long does it take, on average, to issue a final decision on a case from the moment the complaint was received?

11 – Are you relying on data controllers / processors to obtain information for the inspection process? Or are you using your own personnel / third parties to gather evidence?

12 – Once an investigation starts, do you typically investigate only violations mentioned in the complaints? Or expand the scope of investigation if needed?

13 – Upon a decision to sanction a data controller / processor: do you typically give 2nd and 3rd chances or quickly pose sanctions?

14 – Do you view your sanctioning approach as consistent over time? Or more ad hoc, case-based, to create deterrence?

15 – Do you provide warnings or notices of intent, before posing administrative fines?

16 – Did you choose to apply a soft approach for a given period of time, after GDPR became effective, to allow companies to organize for compliance?

17 – Did you ever pose 'periodic penalty payments,' giving companies a timeline to comply with the law?

18 – Does the DPA sanction/fine public bodies as well?

19 – Do you consult with peers via the EDPB, as a matter of courtesy, before posing sanctions?

20 – Do you publish the names of data controllers / processors that are under investigation or after a sanction was posed, or even before the investigation and sanctioning decision have been finalized?

21 – Is your budget dependent in any shape or form on the total amount of administrative fines that you pose? Was it like that before GDPR?

22 – What is the total number of Freedom of Information requests you had to respond to post-GDPR? If your system does not split between pre- and post-GDPR periods, maybe you can report the number of complaints per year for the years of 2016;2017;2018;2019;2020?

23 – What is the total number of staff and from that the total number of technical experts in the agency? Can you provide details on how these numbers have changed over the years?

24 - How many amicable settlements have you reached, per year from 2016 - 2020?

25 - Do you feel that your premise and infrastructures suit your mission? Or should be improved?

26 - What are the sources for your budget? Public budget? Ministry budget?

27 - Who decides on personnel policy? The agency and the government? or the agency alone?

28 - Who is approving your budget? Ministry / Parliament / The DPA?

29 - What is the official status of personnel hired? public servants? employees under public regulation? Do they usually continue to other positions in government?

30 - Who is appointing the head of the agency? Minister / Executive / Legislative?

31 - Who is appointing board members? Minister / Executive / Legislative/Board?

32 - How can the agency's head be dismissed? Related to political changes? For other reasons?

33 - How board members can be dismissed?

34 - What is the agency head and board members' term of office? Can it be renewed?

35 - Do DPA members hold office in the government? or is that not allowed?

37 - Do you have statistics for the number of consultations per year since 2016?

38 - What is the total sum of fines (in Euros), GDPR-related, posed since May 25, 2018, and for every year in 2019 and 2020?

39 – What was your budget for 2020 and how did it change each year since 2016?