

Does Development Aid Improve State Capacity? The Impact of EU Funding on Local Government Capacity in Poland (Working Paper*)

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Abstract

Does development aid affect recipient countries' state capacity? In this study, we focus on two specific types of state capacity, namely (1) the ability to provide information to third parties and (2) to discriminate between different kinds of third-party inquiries. Our theory predicts that, when aid funds are distributed in a competitive fashion and incentivize expansions in administrative personnel, aid may bring about a higher bureaucratic capacity equilibrium. We assess our theoretical argument by analyzing the effect of EU structural funds—arguably the world's most extensive development assistance program—on building local government capacity in the largest aid recipient country, post-communist Poland. Through a randomized survey with more than 2,400 municipal administrations in Poland, we find that local administrations which have benefited more from EU funding, have developed higher levels of *discrimination capacity*. At the same time, we do not find sufficient evidence for increases in *information provision capacity*.

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The most recent version of this paper may be obtained at the following URL:
http://www.janvogler.net/Determinants_State_Capacity.pdf

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1 Introduction

Development aid is central to political-economic relations between developed and developing countries and has been subject to extensive scholarly analysis (Arel-Bundock et al., 2015; Prather, 2020; Travis, 2010). Despite vast sums spent on external financial assistance, its effectiveness is widely contested (Bearce and Tirone, 2010; Boone, 1996; Crawford, 1997; Dietrich, 2014; Gamso and Yuldashev, 2018; Kono and Montinola, 2009; Kono and Montinola, 2015; Paler et al., 2019; Wright, 2008; Wright, 2010; Wright and Winters, 2010). Many scholars suggest that aid can enable rent seeking, fuel corruption, or make governments less accountable to citizens, indicating deterioration in the quality of governance (Bräutigam and Knack, 2004; Easterly, 2007; Henderson, 2002; Moss et al., 2006; Remmer, 2004).¹ One of the areas marked by significant scholarly disagreement pertains the effects of aid on institutional quality and state building. We thus seek to answer the following question: What is the effect of development aid on state capacity?

Building on studies by Wood and Lewis (2017), Chen et al. (2016), and Chong et al. (2014), we focus on and conceptualize two specific types of state capacity: (1) *information provision capacity* (or *information capacity*) and (2) *discrimination capacity*, by which we refer to the capacity of governments to provide information to third parties and discriminate in terms of mobilized resources, respectively. As we elaborate in more detail below, these concepts reflect the increasing role of information rather than coercive power in determining governance quality.

External influence on state capacity exists in two main forms: (1) the direct building

¹On the importance of state capacity and the quality of institutions for development, see Hanson (2014).

of capacity by external entities (Becker et al., 2016; Mattingly, 2017; Vogler, 2019) and (2) the expansion of *existing* capacity through development aid, for instance through IMF programs (Stubbs et al., 2018). We focus on the latter, with the literature presenting mixed views regarding its effectiveness: With respect to bureaucratic capacity or the quality of public services, previous contributions suggest the entire range from positive (Goldsmith, 2001; Kim et al., 2013; Levine, 2004) to negative (Bräutigam and Knack, 2004; Moss et al., 2006) and conditional effects (Jones and Tarp, 2016; Knack and Rahman, 2007; Krasner and Risse, 2014; Selaya and Thiele, 2012). An important gap in the existing literature that we seek to fill is the theoretical and empirical analysis of a *competitive/selective* aid distribution mechanism, such as provided by EU funds.

Accordingly, at the center of our study is one of the largest development aid projects in the world: the European Union (EU) structural funds (Bailey and De Propris, 2002; Becker et al., 2010; Mohl and Hagen, 2010), which have the goals of helping new member states transition to stable democracies² and reducing regional inequalities (Pridham, 2006; Schimmelfennig, 2007; Schimmelfennig and Sedelmeier, 2005).³

We theorize that when aid is subject to a competitive allocation process, such as the EU structural funds applications, it incentivizes investments in administrative capacity, which subsequently—due to bureaucratic stickiness—persists and spills over to other aspects of (local) governance. In our specific case, local governments in new EU member states had incentives to improve their administrative capabilities and hire additional qualified personnel to

²For a critical perspective on whether development aid has positive effects on democracy, see Knack (2004).

³State capacity is important for democracies because public goods are crucial to economic growth (Baum and Lake, 2003; Besley and Persson, 2009), citizens' quality of life (OECD, 2018), and implicitly overall political stability (François and Sud, 2006).

both (1) *initially* attract and (2) *afterwards* administer external assistance by ensuring successful project implementation (to receive additional future aid). Following the completion of EU-funded projects, the reassignment of personnel and the reorganization of departments could have strengthened overall bureaucratic capacity.

We test our theoretical argument through a randomized survey of more than 2,400 Polish municipal governments, which have benefited from EU funds to vastly different extents, and find strong evidence that discrimination capacity is conditional on EU funding levels. At the same time, however, we do not find sufficient evidence to support the view that general information provision capacity (unconditional on the type of inquiry) has improved to the same extent. We discuss possible reasons in the conclusion.

This paper is structured as follows. We first introduce our theory on competitive aid distribution and administrative capabilities. Then, we discuss the design of our empirical test, beginning with our randomized survey. The results of our empirical test are presented in the following section. Before concluding, we evaluate possible reasons for the observed use of discrimination capacity.

2 Theory

In this section, we present a theory on how the availability and absorption of competitive pools of development aid funds incentivizes investments in state capacity. We then elaborate on two specific types of bureaucratic capacity and their relevance to effective governance.

2.1 Development Aid and State Capacity

We are interested in the behavior of independent political entities such as (local) governments, which we consider to be self-interested and utility-maximizing. In the presence of an external funding source in the form of a development aid pool (the allocation of which to specific political entities is not predetermined), these governments individually decide whether to solicit aid with the goal of increasing the welfare of their constituents and, indirectly, their own welfare.

We make four key assumptions with regard to this process: (1) The solicitation process is competitive, meaning that the funding applications are evaluated based on a benchmark as well as their merits relative to each other, and (2) that, as a result, there will be divergence in the amount of funding received; (3) the probability of obtaining funding may be increased through investments in bureaucratic capacity with the explicit purpose of soliciting the aid; and (4) bureaucratic structures are sticky, meaning that the divestment of capacity is more costly than its retainment and subsequent reassignment of excess capacity to other areas.

Although we take some level of preexisting state capacity as given, we implicitly assume an environment in which further investments in capacity—prior to the availability of development aid—were either not feasible or deemed not worthwhile. The availability of

development aid may be treated as an external shock, expanding the set of possibilities with regard to public goods provision. Simultaneously, these investments facilitate the expansion of the economic base in the long run, which makes it financially viable to sustain the added capacity. Therefore, development aid may be a tool that allows to reach a higher state capacity long-term equilibrium.

Because governments are self-interested and utility maximizing, once development aid becomes available, they solicit funds. Given the competitiveness of the process, local administrations are incentivized to hire more personnel and invest in technical expertise to increase their chances of success. Following the reception of aid, further investments in bureaucratic capacity are likely required to ensure successful project implementation.

Bureaucratic structures are known for being highly persistent over time (Becker et al., 2016; Raadschelders and Rutgers, 1996; Silberman, 1993). This is a result of both bureaucratic inertia and path dependence, as well as generally higher levels of job security in the public as opposed to private sector (see, for instance, Bloch and Smith, 1977; Farber, 2010). Job security is an inherent part of bureaucratic employment meant to induce bureaucrats to develop expertise in their respective fields (Gailmard and Patty, 2007).

Because of bureaucratic stickiness, expansions in bureaucratic capacity related to aid will not be disbanded easily. Instead, it is likely that they will eventually spread over entire bureaucracies through transfers and promotions of personnel, knowledge spillovers, and as a result of initial restructuring of internal organization, improvements in work organization, and informatization. Thus, they will be reflected in other aspects of bureaucratic activity that are not related to attracting and managing aid projects.

2.2 Information Provision and Discrimination as Indicators of State Capacity

Echoing Max Weber’s work, scholars often view a capable state as one that maintains a monopoly on violence through coercion, including military and repressive capabilities. Alternatively, administrative capacity is often primarily associated with the state’s ability to generate tax revenues. But in order to be able to act, and react, the state must first possess the necessary information about people, organizations, and events within its territory. This is the reason behind the various schemes making societies more “legible” for the state’s purposes (e.g., [Kain and Baigent, 1992](#); [Scott, 1998](#)). For the state to effectively exercise its coercive power, information on the identities and the location of citizens is a prerequisite ([Hendrix, 2010](#)). Likewise, fiscal extraction necessitates that the state possesses locational and material information on the entities that are to be taxed ([Lee and Zhang, 2017](#)).

However, in this traditional description of state functions, there is no space for the role of the state as a *supplier* of information. And yet, with specific goals in mind, states provide information to citizens on a variety of matters. Local crime statistics increase vigilance and support public safety; severe weather alerts increase preparedness and diminish damages to property and prevent loss of human life; detour road signage reduces congestion and traffic on streets that otherwise would not be able to handle more cars; public information campaigns increase public awareness about proper garbage recycling, raising compliance and decreasing costs. Often, information provision not only replaces coercion or physical enforcement, but sometimes it is a *more efficient* means of furthering the state’s objectives.

In part because of the centrality of information to governing, a growing body of work

investigates the state's capacity to provide information. Existing studies cover the responsiveness of American agencies (Lowande, 2018; Lowande, 2019; Wood and Lewis, 2017), English parish councils (Worthy et al., 2016), Chinese counties (Chen et al., 2016), and the Mexican government (Berliner et al., 2018). The provision of information following inquiries by citizens, lawmakers, or other third parties can be seen as an instrument by which governments achieve their objectives. Specifically, administrations may provide knowledge on their own policies, the implementation of regulations, or the state of local infrastructure. Not just the content but also the promptness of responses to inquiries may serve as a signal of overall governmental efficiency or service orientation.

Not all instances in which governments need to provide information are equal, however. A capable state provides information primarily if it is a legal requirement or furthers its goals. Given general limits to bureaucratic capacity, even for the most capable states, governments may find it in their interest to prioritize (*discriminate*) certain instances of information provision over others. In general, discrimination indicates diverging extents to which bureaucratic resources at the state's disposal are utilized in information provision.

Because of the outstanding importance of administrative capabilities in the described areas, we provide two specific conceptual definitions of bureaucratic capacity below:

- 1. Information (provision) capacity** represents the capability of governments to mobilize bureaucratic resources to respond to inquiries quickly and comprehensively.

- 2. Discrimination capacity** represents the capability of governments to assess different kinds of inquiries, distinguish between them, and adjust the bureaucratic resources utilized to respond.

2.3 Hypotheses

Our theory suggests that development aid is associated with improvements in state capacity that eventually spill over into other areas of public administration, including the areas discussed in detail above. We thus propose the following hypotheses:

Hypothesis 1: Governments that have received more development aid have higher levels of information (provision) capacity, meaning that they provide information in a more comprehensive and timely manner.

Hypothesis 2: Governments that have received more development aid have higher levels of discrimination capacity, meaning that they will show greater variation in response time and comprehensiveness between different kinds of inquiries.

In the empirical test design section, we elaborate in detail how we empirically assess both types of state capacity.

3 Empirical Case: EU Structural Funds in Poland

Our empirical test focuses on the EU's structural funds, a set of financial assistance programs which primarily aim at reducing social and economic disparities between EU regions. The structural funds are financed directly from the EU budget and account for about one third of all expenditures (European Commission, 2014), likely making it the world's most extensive development aid program. The process through which the funds are allocated often involves multiple layers of government in a complex administrative process, which is described in more detail below.

In general, interested parties eligible to receive funding (administrative territorial units, private enterprises, organizations, etc.) apply for it on a project-by-project basis. Given our focus on state capacity, we are particularly interested in administrative territorial units, such as local governments, although many matters related to EU funding are common irrespective of applicant type.

Requirements for funding applications vary depending on the particular subprogram and several other factors. But, in general, the application process begins with correctly identifying the appropriate subprogram for the project under consideration. Then, an extensive application is prepared and submitted for evaluation. The evaluation process typically consists of two steps: (1) a formal assessment and (2) a substantive assessment. Projects are awarded a score based on how well they fulfill the formal requirements and objectives stipulated in a particular funding call. In order to be awarded funding, projects must receive enough points to meet a predetermined threshold. Moreover, the dissemination of funds is also subject to funds' availability. This means that successful projects must not only be

evaluated favorably relative to a benchmark but also receive better evaluations than other projects. Typically, local administrations apply for EU funds to finance projects in the following areas: transportation infrastructure, environmental protection, informatization, social infrastructure (including education and health care), culture, or technical infrastructure.

Poland is the single largest recipient of EU structural funds. The combination of (1) the sheer magnitude of the funds channeled to the country and (2) the low levels of pre-existing local state capacity make it an ideal setting to test our theory. Specifically, from 2007 to 2013 (in the “2007-2013 financial perspective”), Poland received €57.2 billion out of €346.5 billion total EU structural funds ([European Commission, 2016](#)). This amount increased further in the following financial perspective (2014-2020).⁴ EU financial assistance for funding governmental projects has been of outstanding importance. For instance, in the 2007-2013 financial perspective, cohesion policy funds have amounted to 40.9% of Polish government capital investment ([European Commission, 2016](#)). Furthermore, like many other Eastern European countries that had highly centralized political-administrative systems under communism ([Bailey and De Propris, 2002, 303](#)), across Poland, government capacity was underdeveloped at the local level when the country abandoned socialism. Considering Poland’s historical underdevelopment of local state capacity, these vast sums of money could have wide-ranging consequences for building administrative capacity.

Thus, the absorption of vast influxes of EU funding required additional state capacity.

Funding proposals—which would need to meet the EU’s technical conditions and be sub-

⁴Importantly, preaccession funds (1) have been small compared to the structural funds and (2) were predominantly allocated to central governments. Exceptions are the 43 projects in the area of environment (building sewage networks, treatment plants, drinking water infrastructure improvements), which have been allocated a total of €1.285 billion in the years 2000-2003 ([European Commission, 2005](#)) and implemented at the local government level, albeit not by local bureaucracies but rather municipally-owned corporations. On this issue, see also [Bailey and De Propris \(2004\)](#).

jected to a selective allocation process⁵—had to be developed by local public administrations. Pander (2009, 121) argues that municipalities that created a specific organizational unit for the purpose of attracting funds were most successful. They also likely implemented procedures that allow for a better flow of information between various organizational divisions of the bureaucracy. Moreover, since there have been a total of 115 institutions in Poland that were responsible for various elements of the implementation of the 2007-2013 financial perspective (Ministerstwo Rozwoju. Departament Koordynacji Wdrażania Funduszy Unii Europejskiej, 2015), developing the ability to communicate/coordinate with actors outside of local administrative structures was similarly crucial.

This process is particularly visible when observing the smallest units of administrative division, *gmina* (municipality), which often had to develop additional administrative capabilities. Swianiewicz et al. (2013) provide evidence that between the 2004-2006 and the 2007-2013 financial perspectives, local governments in Poland underwent a process of learning, becoming better at managing externally funded projects. Increases in state capacity are visible in the fact that, between 2006 and 2010, total public administration employment at the municipality level increased by 14.7% (Ornoch-Tabędzka et al., 2014).

Improvements in bureaucratic capacity are similarly reflected by changes in absorption levels. When considering the funds from the European Regional Development Fund (ERDF) allocated for the 2004-2006 perspective, by the end of 2005 Poland’s absorption rate was the third lowest in the EU at 18.5%, compared to the EU average of 55.9%. But, by mid-2007, there has been a visible improvement in ERDF funds absorption, to 52.64% (the fourth

⁵That the process was indeed selective is, for instance, indicated by the fact that in the 2007-2013 financial perspective, there were 302,400 funding applications submitted for a total of PLN 616 billion. Of these, only 106,321 projects for a total of PLN 398 billion were awarded funding (Ministerstwo Funduszy i Polityki Regionalnej, 2016).

highest among the new EU Members), compared to the EU average of 72.1% (European Parliament, 2007). In the 2007-2013 perspective, Poland was initially oscillating around the EU average in terms of absorption, and since 2009 has pulled ahead. By 2016, it has managed to absorb 100% of the allocated ERDF funds, as one of only eleven EU-28 countries (European Commission DG REGIO, 2019).

A technical report prepared for the European Parliament states the funds' beneficiaries' limited experience with project preparation, insufficient staffing and limited knowledge of public procurement procedures as some of the major reasons for explaining the low absorption rates in the initial period of fund distribution (European Parliament, 2007). The early lack of local administrative capacity may have been associated with the nascent process of political decentralization, which was underway in Poland at the time.

4 Empirical Test

To measure both information provision and discrimination capacities, we conducted a randomized survey with more than 2,400 public administrations in Poland. Our empirical strategy is described in detail below.

4.1 The Randomized Survey

Because of our focus on administrative capacity of governments in terms of (1) mobilizing resources to reply to third-party inquiries and (2) discriminating between various types of requests, we constructed a total of four different inquiries (in a 2x2 randomized design). Municipalities were randomly assigned to a “business inquiry” or an “academic inquiry” (with substantive differences in the inquiry text).⁶ Furthermore, they were assigned to an extensive inquiry or a shorter inquiry (with more subtle differences in the number of questions only).

The creation of an academic and a business inquiry happened to find out if differences in the substance of inquiries would lead to the use of discrimination capacity. Moreover, the creation of a shorter and a more extensive inquiry had the purpose of assessing if the latter would require the mobilization of more (human) resources.

All of the inquiries we sent out included questionnaires with three broad sections:

1. **Section I:** Questions on the local public administration
2. **Section II:** Questions on various substantive topics related to the municipality (primarily about local conditions affecting citizens and businesses)
3. **Section III:** Questions on the survey response procedure and conditions

⁶The random assignment allows for the municipalities that received each type of the inquiry to be, on average, indistinguishable. See also the appendix (A.2).

The style and content of both (1) our introductory email and (2) the range of substantive questions (section II) varied between four survey conditions, while section I and section III remained the same as they were limited to technical questions. [Table 1](#) shows these four different conditions along two axes. All of our emails, questionnaires, and the information sheet were fully translated to Polish to ensure that there was no language barrier.⁷

Table 1: Different Types of Inquiries in our Randomized Survey

	Extensive Inquiry	Shorter Inquiry
Business Inquiry	Survey Condition A	Survey Condition C
Academic Inquiry	Survey Condition B	Survey Condition D

In the academic inquiry, we greatly emphasized the academic character of our request, speaking of a “research project” multiple times and highlighting the fact that we are “researchers” at Duke University. For the business inquiry, we put the emphasis on a business-related project for which we requested data. Specifically for the business inquiry, we designed a website, on which we plan to eventually make collected data on substantive questions publicly available (www.invest-in-poland-now.com). In our introductory email, we greatly emphasized the utility of these data to investors. We also mentioned that the data would be used for a research project in an attached information sheet, but substantially more emphasis was placed on the investment website.

The difference between the extensive and the shorter inquiry was not as pronounced. It consisted of a few additional questions, potentially requiring additional human resources.

We have anecdotal evidence that our inquiry did in fact necessitate public administrations to make a choice as to whether or not to mobilize (human) resources. One municipality wrote:

⁷More information on differences between the inquiries is included in the appendix [\(A.3\)](#).

“I inform you that, due to a large number of requests for access to public information that were received by the office in that period (September 2018), there were no organizational options to complete the survey.” And another municipality informed us that “[t]he questionnaire you are writing about has not been filled out due to the large number of other tasks that needed to be performed.”

4.2 How is Discrimination Capacity Used? Considerations about Possible Causal Channels

Our hypothesis suggests that municipalities that have received higher levels of EU funding have developed more *discrimination capacity*, which referred to their ability to distinguish between different types of inquiry and adjust the mobilized resources. According to which factors could discrimination take place? In principle, there are many such factors. We anticipate that the following factors could play key roles:

1. Whether or not there is a legal obligation to respond to an inquiry
2. The expected (economic) benefits from replying to an inquiry
3. The perceived internal consistency and credibility of an inquiry
4. The time and effort involved in responding

Although we avoided making an explicit reference to the Polish “Access to Public Information” law, our academic inquiry was more similar to a typical inquiry based on this law that a Polish municipality would receive. Therefore, municipalities with high discrimination capacity might positively discriminate in favor of the academic inquiry.

In general, we expected that there is a substantial chance that public administrations would positively discriminate in favor our business inquiry because the potential economic benefit could be seen as higher. Alternatively, it is also possible that local public administrations with high EU funding/high state capacity, might already have created an investor-relations department or similar institutions that decrease the relative economic benefits from responding to the business inquiry. Accordingly, municipalities with high state capacity could discriminate *against* the business inquiry.

Another reason for why municipalities with high state capacity might discriminate in favor of the academic inquiry is that the business inquiry has a lower level of internal consistency. The lower internal consistency or credibility of our business inquiry resulted from the fact that we simultaneously claimed that (1) we run a business website and (2) we are academic researchers (although we minimized the latter piece of information).

Regardless of what the precise channels were, empirically (as we show below) we clearly observe a significant discrimination between the different types of inquiries by municipalities with high levels of EU funding, indicating substantial discrimination capacities. To find out more about the reasons for discrimination, we conducted a follow-up survey with local administrations (as we detail after the empirical results).

4.3 Empirical Measurements

In order to assess variations in the capacity of local governments to respond to our inquiries, we primarily consider three different measurements.⁸

⁸Moreover, to address possible concerns about our three primary measurements, we include information on additional variables in the appendix.

Responded (At Least One Substantive Question Answered): This is a binary variable that is coded “1” if a public administration responded to us and answered a minimum of one substantive question.⁹

Bureaucrats Working on Answer: This is a continuous variable, bound between 0 and 1, and measures the proportion of bureaucrats of the local public administration who were working on our survey. We code public administrations that have not devoted any bureaucrats to answering as 0.

Response Time: This is a discrete variable, bound between 0 (replied on the same day) and 36 days (latest response). It measures the number of business days that a local public administration needed to reply to our inquiry (not including weekends/holidays).

4.4 Measuring EU Funding

Since our theory centers on the impact of development aid on (local) state capacity, the level of EU funding that a municipality has received is our key independent variable. Thus, our primary measurement are total per capita EU revenues from 2010 to 2017 (log.). Because the survey was conducted in 2018, we avoid including funding obtained in 2018 because, even if additional bureaucratic capacity was created to administer funding in this year, it likely would not have translated into other forms of bureaucratic capacity yet.

EU revenues are defined as the sum of revenues accrued by each municipality, coming from the following three sources: (1) EU transfers for financing EU-funded projects, (2) transfers from the central government budget for co-financing EU-funded projects, (3)

⁹We expect that the substantive questions required significantly more effort than other (general) questions. Additionally, in the appendix, we provide a measurement of the proportion of questions answered.

transfers that are reimbursements for already incurred costs of EU-funded projects. Based on a municipality's population size, we create a per-capita measurement.

It is important to note that, in 2010, there was a minor change in the coding of this variable, which is related to the change in the legal classification of the various categories of budget items. Therefore, our main measurement is restricted to the time period 2010-2017. In the appendix (A.7) we consider alternative time periods and remove outliers.

4.5 Considerations Regarding Response Rates

Out of the 2,478 municipalities that we have contacted, we were able to successfully deliver emails to 2,448. For the remaining 30, the email address in our database was incorrect. Because we have no reason to believe that there was a systematic reason for incorrect email addresses, we excluded them from the sample. We received a total of 542 responses, meaning a response rate of 22.1%.

When evaluating the response rate, we need to take into account multiple factors. First, participation was entirely voluntary. Our goal was to observe whether the municipalities, based on their internal evaluation of our inquiry, *chose to* mobilize resources to respond. Explicitly compelling them to do so by legal means would prevent us from effectively reaching that goal.¹⁰

Moreover, it is important to note that every Polish local government is legally required to maintain a website. Electronic correspondence with public administrations conducted through the government-operated platform ePUAP is legally equivalent to regular mail.

¹⁰Nonetheless, as acknowledged previously, our academic inquiry had an appearance that is closer to such a request, which could have affected response behavior.

Accordingly, electronic correspondence is normal and frequent.

We thus do not expect factors such as possible regional differences in internet access rates to affect our inquiry. This is especially true because electronic communication with public administration is increasingly common in Poland. For instance, in 2018, 35.5% of individuals aged 16-74 and 71.3% of firms communicated with public administrations online (GUS, 2018).

Importantly, there is a possibility that our message was blocked by a spam filter or was not delivered to the recipient as a result of mailbox/server configuration. However, we have no reason to believe that these issues would have differently affected the emails sent as part of the different survey types. We have verified this by using a free spam score checker (www.mail-tester.com), which assesses messages based on numerous criteria that are used by spam filters when classifying incoming emails. All types of emails that were sent, have received an identical “spam score,” meaning that it would not explain the receipt rates and thus the resulting response rates across the different types of inquiries.

4.6 Covariates

A large number of factors could result in an omitted variable bias. Therefore, we control for them in our empirical specifications. If not otherwise noted, we have obtained these data from [Statistics Poland \(2018\)](#). Summary statistics can be found in the appendix (A.1).

Population (2017) (Log.): This variable shows the population size of a municipality. Larger municipalities could profit from economies of scale or they might receive a larger number of inquiries per year and might have more standardized/efficient response procedures.

Firm Density: This variable shows the number of firms per 1,000 inhabitants in 2017. Municipalities with a higher firm density might be particularly used to business-related inquiries.

Corporate Income Tax: This variable measures the per capita corporate income tax revenues of a municipality (in PLN) in 2017. The level of business activity of a municipality could influence its incentives to attract further businesses and thus affect response behavior to the business inquiry.

Population Density: This variable reflects the number of inhabitants per square kilometer in 2017. More densely populated municipalities are often urban rather than rural, with important implications for their socio-economic profile.

Unemployment Rate This variable shows the unemployment rate of the county in 2017. High unemployment rates likely increase the incentives for municipalities to attract additional investment.

Average Monthly Salary: This variable measures the average monthly salary at the county level (as a percentage of the national average) in 2017. Municipalities with a higher average monthly salary presumably have better economic conditions.

Net Migration: This variable shows the net migration per 1,000 population in 2017. It is a good representation of a municipality's attractiveness.

Working Age Population: This variable measures the working age population (18-64 years of age for men, 18-59 years of age for women) as a share of the total population in 2017. This factor could affect incentives to attract business investment.

In/Out Commuter: This is the ratio of people who commute in and out of the mu-

nicipality for work in 2011.¹¹ Values above 1 indicate that more people commute into the municipality than out of the municipality, showing its relative (regional) economic centrality.

Historical Legacies: A recent study by [Vogler \(2019\)](#) suggests that Poland’s public administration is still affected by the legacies of past imperial rule. Therefore, we include dummies for past imperial rule (“Austria”, “Germany” and “Russia”) and also for the population resettlement that followed World War Two (by including a control for “Interwar Poland”). The data come from [Charasz \(2020\)](#).

Mayor Party Affiliation: Party affiliation is measured by four dummy variables equal to 1 if during the 2014-2018 term the mayor is a member of, or has been supported by the committee of, one of the following political parties: PO, PSL, PiS, SLD. The political affiliation of the mayor could impact the favorability towards different entities, such as researchers or business entities. The data were obtained through an email inquiry to the [National Electoral Commission \(Państwowa Komisja Wyborcza\) \(2019\)](#).

Mayor Higher Education: This dummy variable shows if a mayor has higher education. The source of the data is the same as above.

Moreover, we include two covariates that are directly related to our own inquiry. These two covariates are meant to control for consequences of our own communication.

Email Inquiry: This variable shows whether a local public administration sent us any email inquiry about our study. Since we often needed to first respond to their inquiry, this might have caused delays in the responses of these municipalities.

Reminder Email: After 24 days (or 18 working days), we sent a reminder email to all municipalities which had not yet replied by that time. The reminder email might have

¹¹Unfortunately, more recent data was not available.

incentivized some municipalities to reply more quickly (or reply at all), meaning that we should take it into account in some of our empirical specifications. However, the main downside of including this control variable is that it was not randomly assigned insofar as it only applied to communes that had not replied to us at a specific time. Thus, this variable has the potential to explain large parts of the variation in response times and might be related to municipality characteristics (which could mean collinearity with other measures). Accordingly, we also present specifications without this covariate.

4.7 Accounting for Factors Influencing Preexisting State Capacity

As elaborated above, the highly centralized administrative institutions under communism meant that, initially, local state capacity was only marginally developed. This circumstance makes Poland a strong test case for expansions in state capacity through development aid. Even though local state capacity was generally low, there may have been some variation across municipalities. How can we account for possible divergence in preexisting capacity and its effect on EU funding?

To the best of our knowledge, no measurement for general state capacity prior to the introduction of EU membership or significant EU structural funds exist (i.e., for 2003 or earlier). While we are able to evaluate present-day state capacity in two concrete areas (*information provision* and *discrimination*), our measurements do not have a historical dimension.

To address this issue, we rely on a number of variables that could *jointly* account for most variation in preexisting levels of state capacity. We first use these variables to predict levels of EU funding. Subsequently, we use the unexplained variation in EU funding to predict

response behavior. The rationale behind this empirical strategy is that we attempt to isolate the non-systematic or quasi-random components of EU funding levels, which cannot be linked to systematic measurable differences between municipalities, and see how only these impact observed patterns of information and discrimination capacity.

Specifically, we use the following variables to predict systematic variations in the ability of local administrations to attract EU funds:

1. **Average Total Tax Revenues (1999-2003) (Log.):** Local tax revenues are a strong proxy for a municipality's wealth, significantly affecting the funding of administrative institutions.
2. **Average Total Population (1999-2003) (Log.):** Larger municipalities (in terms of population size) could profit from economies of scale in administrative tasks, impacting state capacity.
3. **County seat (1999-2003):** Municipalities that have a county seat status have additional administrative tasks and can thus be expected to have higher overall bureaucratic capacity.
4. **Historical Legacies (Empire and War):** Following [Vogler \(2019\)](#), historical legacies strongly affect the efficiency and meritocracy of local administrations—key factors influencing bureaucratic capacity.

The inclusion of tax revenues as a proxy for wealth is also important because there likely is a favorable bias of the EU's development assistance towards poorer municipalities. For the same reason, we also include dummy variables for all provinces (*voivodeships*), with municipalities in several Eastern provinces being more likely to receive high levels of per-capita funding. Thus, we account for the most important systematic reasons for the initial allocation of EU funding.

5 Results

In this section, we present the results of our empirical test. Overall, we find strong support for EU funding being associated with greater levels of *discrimination capacity*. Public administrations that have received more EU funding are more likely to discriminate between the academic and the business inquiry, which is reflected by the fact that, when receiving the academic inquiry, they are relatively more likely to respond, assign more bureaucrats to responding, and respond more quickly. At the same time, we do not find sufficient evidence for EU funding being associated with greater overall levels of *information provision capacity*.

The following sections illustrate these results. Below, we also discuss possible reasons for why discrimination capacity was used against the business inquiry. In order to provide additional evidence that the differences in responsiveness and its comprehensiveness are driven by differences in the availability and allocation of bureaucratic capacity, in the appendix (A.6), we consider two alternative dependent variables and confirm previously obtained results.

5.1 Information Provision Capacity

We begin by looking at whether EU funding is associated with greater levels of information capacity. In Table 2 we present the results with respect to our main variable: *Responded (Substantive)*. We are primarily interested in the regression coefficient for the variable *EU Revenues PC*. Model 1 presents the baseline specification without any control variables. Models 2 through 5 add additional control variables for socio-economic factors, historical legacies, survey-specific factors and province fixed effects, respectively. Overall, we find no statistically significant effect of having received more EU funding per capita on the proba-

bility of responding to our inquiry.

Table 2: Information Capacity: Probit Estimates for Municipality Response

	Responded (Substantive)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.)	-0.020 (0.041)	0.006 (0.044)	0.009 (0.044)	0.056 (0.053)	0.055 (0.056)
Business Inquiry				-0.299*** (0.070)	-0.293*** (0.070)
Extensive Inquiry				0.113 (0.070)	0.111 (0.070)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2448	2346	2346	2121	2121
χ^2	0.23	45.27	49.27	102.45	113.59
Pseudo R ²	0.000	0.019	0.020	0.062	0.072

Robust standard errors in parentheses. Constant term has been omitted. * p<0.05, ** p<0.01, *** p<0.001

Table 3 presents the results using an alternative dependent variable, which measures the share of bureaucrats working at the local public administration that participated in responding to our inquiry. Similarly, across all model specifications we find no significant effect of EU funding on the municipality deploying a higher share of its employees when responding to inquiries in general (across all types).

Additionally, we look at whether EU funding is associated with a faster reply to our inquiry. Again, we find no relationship between EU funding and the time that the municipalities took to reply. These results can be found in the appendix (A.5). Overall, we do *not* find sufficient evidence in favor of hypothesis 1.

Table 3: Information Capacity: Tobit Estimates for Share of Buraucrats Working on Inquiry

	Bureaucrats Working on Answer (Share)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.)	-0.000 (0.006)	-0.001 (0.006)	-0.000 (0.006)	0.003 (0.005)	0.002 (0.005)
Business Inquiry				-0.029*** (0.007)	-0.028*** (0.007)
Extensive Inquiry				0.017* (0.007)	0.017* (0.007)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2423	2321	2321	2321	2321
F	0.01	2.07	2.05	35.52	21.81
Pseudo R ²	0.000	0.028	0.033	0.668	0.682

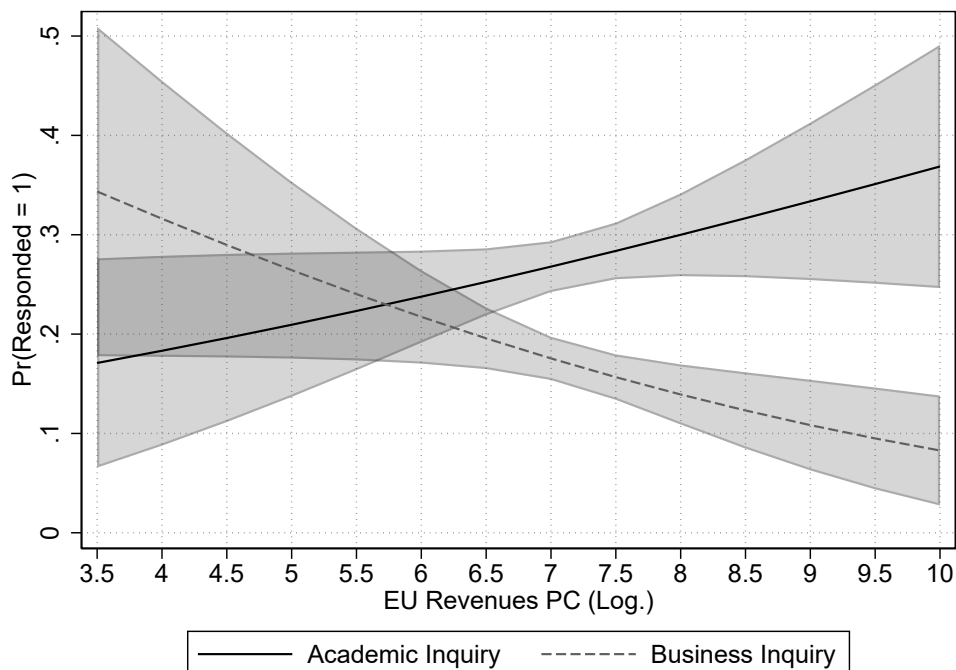
Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.
 * p<0.05, ** p<0.01, *** p<0.001

5.2 Discrimination Capacity

We now proceed to assessing divergence in discrimination capacity. Table 4 shows regression results with respect to our main variable: *Responded (Substantive)*. In this specific analysis, we are primarily interested in the coefficient of the interaction term between the types of inquiry (dummy variable *Business Inquiry*) and EU funding. Similarly as above, Model 1 is the baseline model and Models 2 through 5 add controls. Across the specifications, we find a substantive and statistically significant (at the 99% level) effect of EU funding on decreasing the likelihood of municipalities responding to the business inquiry, strong evidence of discrimination based on inquiry type. A 10% increase in EU funding is associated with a 0.65-0.78 percentage points decrease in the probability of a municipality responding to the

business inquiry relative to the academic inquiry.¹²

Figure 1: Response to Inquiry — Predictive Margins



The results (for Model 1) are summarized in Figure 1 which illustrates the probability of public administrations responding to our two types of inquiries for different levels of EU funding, as well as 95% confidence intervals. As shown, for higher levels of EU funding, the academic inquiry is significantly more likely to receive a response than the business inquiry. However, for lower levels of EU funding, there is no statistically significant difference in the probability of responding to either inquiry. This implies that that municipalities with low EU funding do not possess sufficient *discrimination capacity*. At the same time, EU funding is positively associated with discrimination capacity.

Next, we consider an alternative dependent variable that measures the number of bu-

¹²This value is the difference between the average marginal effect of an increase in EU funding given the business inquiry and the average marginal effect of an increase in EU funding given the academic inquiry. We do not directly report the marginal effects here. See [Greene \(2010\)](#) for a detailed justification.

Table 4: Discrimination Capacity: Probit Estimates for Municipality Response

	Responded (Substantive)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.)	0.095 (0.057)	0.130* (0.059)	0.134* (0.060)	0.192** (0.071)	0.188* (0.074)
Business Inquiry	1.408* (0.605)	1.570* (0.629)	1.590* (0.631)	1.884* (0.738)	1.855* (0.743)
Business Inquiry × EU Revenues PC (Log.)	-0.246** (0.084)	-0.271** (0.088)	-0.273** (0.088)	-0.306** (0.103)	-0.301** (0.104)
Extensive Inquiry	0.090 (0.057)	0.109 (0.059)	0.111 (0.059)	0.116 (0.070)	0.113 (0.070)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2448	2346	2346	2121	2121
χ^2	46.85	90.29	93.09	105.63	116.07
Pseudo R ²	0.019	0.039	0.040	0.067	0.076

Robust standard errors in parentheses. Constant term has been omitted. * p<0.05, ** p<0.01, *** p<0.001

reaucrats who worked on replying to our inquiry as a share of all bureaucrats at the local administration. As this variable is left-censored at 0 for those municipalities that did not respond to our inquiry, we estimate a Tobit model. The results are in Table 5. Similarly, the coefficient on the interaction term is negative and significant at the 99% level. Note that the coefficient on the variable *Extensive Inquiry* is positive and significant at the 95% level, which provides further evidence that municipalities evaluate inquiries and adjust resources accordingly.

In Figure 2 we plot the average marginal effect of having more EU funding on the share of bureaucrats working on the answer conditional on the municipality responding to our inquiry. Again, conditional on responding to our inquiry, municipalities that received more EU funding also devote a higher share of bureaucrats to replying to the academic inquiry

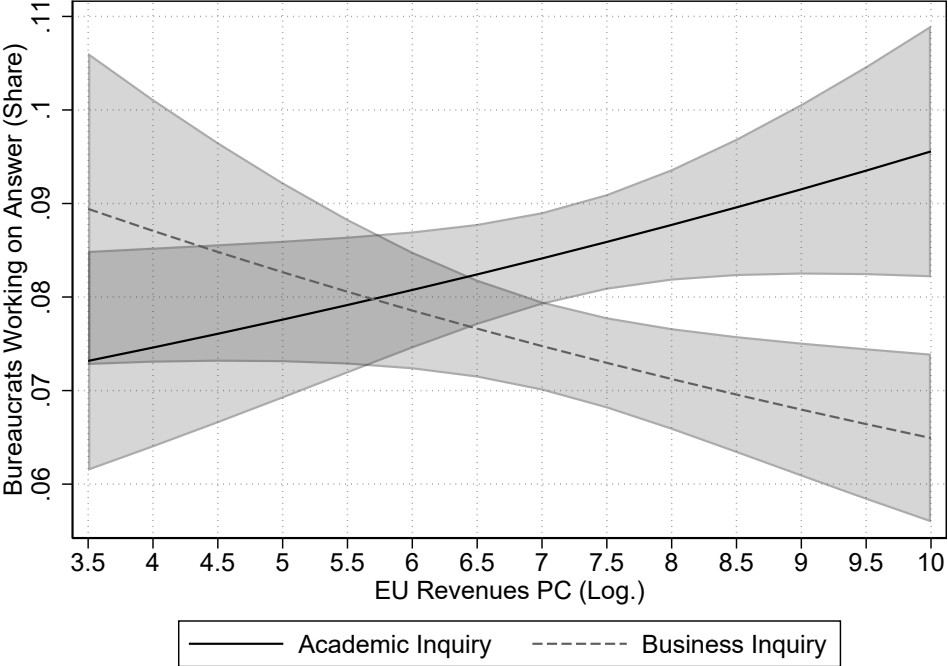
Table 5: Discrimination Capacity: Tobit Estimates for Share of Bureaucrats Working on Inquiry

	Bureaucrats Working on Answer (Share)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.)	0.014 (0.008)	0.015 (0.008)	0.015* (0.008)	0.016* (0.007)	0.016* (0.007)
Business Inquiry	0.182* (0.081)	0.197* (0.081)	0.199* (0.081)	0.186** (0.067)	0.181** (0.067)
Business Inquiry × EU Revenues PC (Log.)	-0.032** (0.011)	-0.034** (0.011)	-0.034** (0.011)	-0.030** (0.009)	-0.029** (0.009)
Extensive Inquiry	0.018* (0.008)	0.019* (0.008)	0.019* (0.008)	0.017* (0.007)	0.017** (0.007)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2423	2321	2321	2321	2321
F	11.58	4.34	3.96	34.46	21.55
Pseudo R ²	0.052	0.085	0.090	0.679	0.692

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.
* p<0.05, ** p<0.01, *** p<0.001

relative to the business inquiry. We find that a 10% increase in EU funding is associated with 0.067-0.077 percentage points decrease in the share of bureaucrats working on the response to the business inquiry relative to the academic inquiry. For the unconditional average marginal effect, a 10% increase in EU funding is associated with this value being at 0.29-0.34 percentage points.

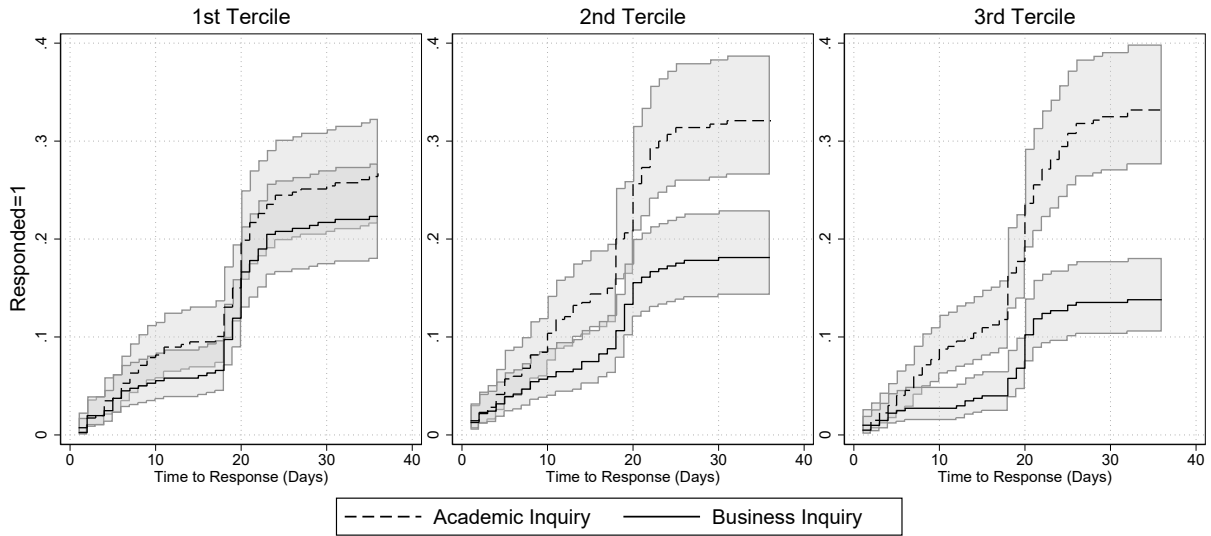
Figure 2: (Share of) Bureaucrats Working on Inquiry — Average Marginal Effect conditional on Responded=1



Our final dependent variable captures the time (measured in working days) that municipalities took to respond to the inquiry. We are interested in whether municipalities discriminated between the two inquiries and prioritized one over another given the EU funding they have received. Our results are summarized in Table 6. We find that the Hazard ratio for the interaction term is below 1 and statistically significant at the 99% level. This implies that for higher levels of EU funding, receiving the business inquiry is associated with

a longer response time.

Figure 3: Cumulative Hazard Estimates for Each Tercile of EU Revenues PC (Log.)



This is illustrated by Figure 3 which plots the Nelson-Aalen cumulative hazard estimates and 95% confidence intervals around them for each type of inquiry and each tercile of the distribution of EU funds. On the first panel, we can see that the two curves closely follow each other, indicating no difference in response time to the two inquiries among municipalities that received the least EU funding. The subsequent panels indicate that for greater levels of EU funding, municipalities reply more quickly to the academic inquiry relative to the business inquiry, effectively discriminating between the two.

5.3 Accounting for Preexisting State Capacity

As described earlier, we conduct a second set of analyses in which we use key variables measured prior to Poland’s EU membership to predict the level of EU funding received by local municipalities. We then proceed to isolate the unexplained variation (residuals) and

Table 6: Discrimination Capacity: Cox Proportional-Hazards Model for Time to Respond

	Time to Respond (Days)				
	(1)	(2)	(3)	(4)	(5)
Business Inquiry	8.868* (8.170)	11.724** (11.078)	12.300** (11.754)	14.158** (13.390)	15.469** (15.421)
EU Revenues PC (Log.)	1.136 (0.091)	1.178* (0.095)	1.188* (0.096)	1.119 (0.096)	1.137 (0.105)
Business Inquiry × EU Revenues PC (Log.)	0.683** (0.088)	0.655** (0.087)	0.651** (0.087)	0.660** (0.088)	0.652** (0.092)
Extensive Inquiry	1.156 (0.101)	1.197* (0.106)	1.203* (0.106)	1.097 (0.097)	1.097 (0.101)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2430	2330	2330	2330	2330
χ^2	44.97	120.29	124.56	87.57	107.35
Pseudo Log-Likelihood	-4028.461	-3890.989	-3890.989	-3890.989	-3886.562

Exponentiated coefficients (Hazard ratios); t statistics in parentheses. Constant term has been omitted.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

use only this component to assess the response behavior by local administrations.

The results of this analysis closely mirror the results that were previously obtained. Even when only using unexplained variation in EU funding, we find evidence for the (residual) EU funding (that cannot be explained by factors affecting preexisting capacity) to be associated with greater levels of discrimination capacity. Simultaneously, though, we find no such relationship with information capacity. Accordingly, these empirical analyses provide additional support for hypothesis 2, but again no sufficient support for hypothesis 1.

We must note the limitations of this approach. Although we attempt to isolate the quasi-random variation in EU funding, we may not have captured all systematic factors exhaustively and our results ultimately do not allow us to make causal claims about the

Table 7: Predicting EU Revenue Levels

	EU Revenues PC (Log.)	
	Coefficient	SE
Average Total Tax Revenues (1999-2003) (Log.)	0.364***	(0.099)
Average Total Population (1999-2003) (Log.)	-0.610***	(0.097)
County Seat in 1999-2003	1.001***	(0.109)
Austria	0.158	(0.082)
Russia	0.120*	(0.055)
Interwar Poland	0.068	(0.070)
Province FE	Yes	
Observations	2447	
R ²	0.191	
Adjusted R ²	0.184	

Note: OLS. Robust standard errors in parentheses. Constant term has been omitted. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

relationship between EU funding and capacity. We therefore urge the reader to consider these results with caution.

In Table 7, we show the results of OLS regression which we use to predict the level of EU funding that a municipality is expected to have received. This is the first stage of our two-stage estimation method. We then subtract this predicted value from the actual value and obtain residual values, the unexplained variation which are henceforth used as independent variable.

We replicate our results from Section 5.1 in Table 8. Models 1 and 2 show the results for whether municipality responded to the inquiry, without and with all the control variables included, respectively. Models 3 and 4 show the results for the bureaucrats working on the answer, similarly, without and with all the control variables included, respectively. The results are in line with previous findings, we find no evidence for overall higher levels of information capacity.

In Table 9 we replicate the same results, this time for discrimination capacity. Across

Table 8: Information Capacity: Estimates for Response and Share of Bureaucrats Working on Inquiry Using Residuals

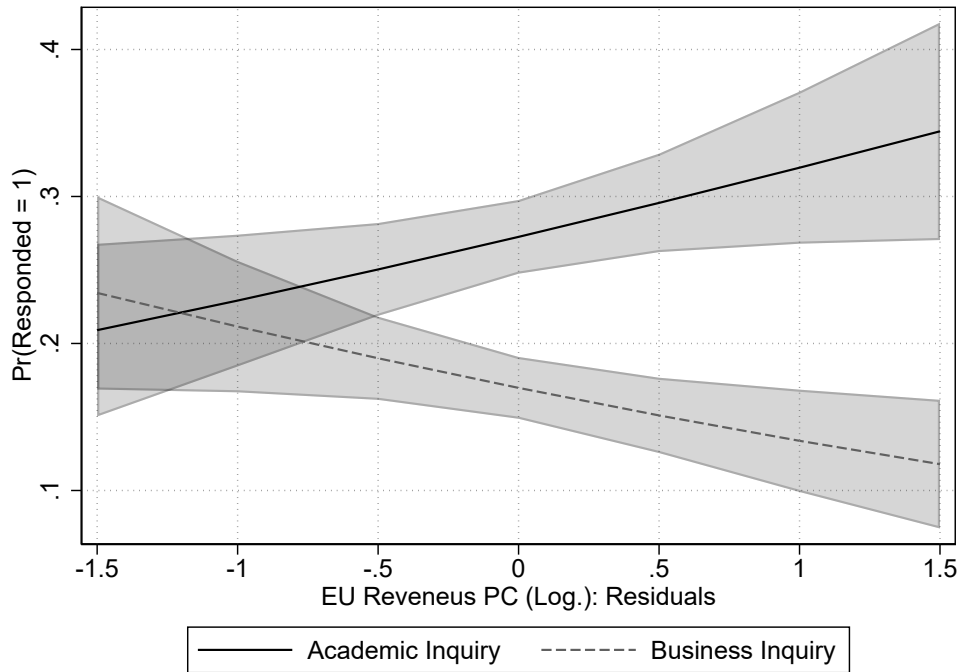
	Responded (Substantive)		Bureaucrats Working on Answer (Share)	
	(1) Probit	(2) Probit	(3) Tobit	(4) Tobit
EU Revenues PC (Log.): Residuals	0.003 (0.047)	0.062 (0.058)	-0.002 (0.006)	0.002 (0.005)
Business Inquiry	-0.348*** (0.057)	-0.293*** (0.070)	-0.046*** (0.008)	-0.028*** (0.007)
Extensive Inquiry	0.092 (0.057)	0.112 (0.070)	0.018* (0.008)	0.017* (0.007)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Province FE	No	Yes	No	Yes
Observations	2447	2120	2422	2320
Pseudo Log-Likelihood	-1293.960	-864.312	-469.927	-439.886
Pseudo R ²	0.015	0.072	0.044	0.683

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.

* p<0.05, ** p<0.01, *** p<0.001

all models, the interaction term is negative and significant at the 99% level, in line with our previous results. This is illustrated for the first dependent variable in Figure 4.

Figure 4: Response to Inquiry — Predictive Margins (Using Residuals)



Finally, in Table 10 we replicate the results for the time that municipalities took to respond to our inquiry. Models 1 and 2 show the results for information capacity, and Models 3 and 4 show the results for discrimination capacity. Our results are consistent with previous ones.

Table 9: Discrimination Capacity: Estimates for Response and Share of Bureaucrats Working on Inquiry Using Residuals

	Responded (Substantive)		Bureaucrats Working on Answer (Share)	
	(1) Probit	(2) Probit	(3) Tobit	(4) Tobit
EU Revenues PC (Log.): Residuals	0.136* (0.064)	0.205* (0.080)	0.014 (0.008)	0.015* (0.007)
Business Inquiry	-0.350*** (0.057)	-0.288*** (0.070)	-0.047*** (0.008)	-0.028*** (0.007)
Business Inquiry × EU Revenues PC (Log.): Residuals	-0.290** (0.094)	-0.320** (0.117)	-0.035** (0.013)	-0.028** (0.010)
Extensive Inquiry	0.092 (0.057)	0.114 (0.070)	0.018* (0.008)	0.017** (0.007)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Province FE	No	Yes	No	Yes
Observations	2447	2120	2422	2320
Pseudo Log-Likelihood	-1293.960	-864.312	-469.927	-439.886
Pseudo R ²	0.019	0.076	0.052	0.690

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.
* p<0.05, ** p<0.01, *** p<0.001

Table 10: Information and Discrimination Capacity: Cox Proportional-Hazards Model for Time to Respond Using Residuals

	Time to Respond (Days)			
	(1)	(2)	(3)	(4)
EU Revenues PC (Log.): Residuals	1.006 (0.072)	0.981 (0.078)	1.199* (0.110)	1.160 (0.117)
Business Inquiry	0.587*** (0.052)	0.742** (0.072)	0.584*** (0.052)	0.735** (0.071)
Extensive Inquiry	1.159 (0.101)	1.091 (0.101)	1.157 (0.101)	1.095 (0.101)
Business Inquiry × EU Revenues PC (Log.): Residuals			0.643** (0.092)	0.654** (0.103)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Province FE	No	Yes	No	Yes
Observations	2429	2329	2429	2329
χ^2	37.72	96.49	46.51	103.81
Pseudo Log-Likelihood	-4028.220	-3886.316	-4028.220	-3886.316

Exponentiated coefficients (Hazard ratios); t statistics in parentheses. Constant term has been omitted.

* p<0.05, ** p<0.01, *** p<0.001

6 Possible Discrimination Channels and Alternative Explanations

Our results show that, on average, municipalities with high levels of EU funding were more likely to respond, mobilized more resources, and responded more quickly when they were answering the academic inquiry. At the same time, they effectively discriminated against the business inquiry. Why did these municipalities use their discrimination capacity in this way? Furthermore, can we rule out alternative explanations for the observed patterns? We sent a follow-up survey to all municipalities that had not responded to our initial inquiry. We use their answers as anecdotal evidence to understand the difference in response behavior across inquiries. Even though this analysis is neither final nor exhaustive, it offers important insights into the observed patterns.

6.1 Possible Discrimination Channel 1: “Municipalities with Higher Levels of State Capacity have their Own Means of Promoting their City to Private Investors”

Our theory suggests that municipalities with high levels of EU funding have developed higher levels of state capacity. While we assess increases in their information provision and discrimination capacities, they could also use excess capacities for the promotion of their municipality as a destination for private investment. Accordingly, municipalities with high levels of EU funding might be using the resulting state capacity for the purpose of advertising to private investors. Under such circumstances, the economic value of responding to our busi-

ness inquiry decreases, which could explain discrimination against it by high-state-capacity municipalities. This motivation would be in line with our theoretical argument.

We have some anecdotal evidence that would support this channel. For example, one municipality informed us that they did not reply to us for the following reason:

“In response to your question, we inform you that we have received the message of 25/09/2018. After analyzing it, we assessed our promotional activities as meeting our needs. [Municipality name] has a dedicated website for presenting investment property offers to potential investors, and we also actively participate in various fairs, including international ones (e.g., the prestigious MIPIM fair in Cannes). The above points were the reason for the decision not to complete the survey.”

6.2 Possible Discrimination Channel 2: “Municipalities with Higher State Capacity are More Effective at Assessing the Internal Consistency and Credibility of Our Inquiry”

As researchers, we may have credibly posed as academics, but perhaps less so as affiliates of a business portal. Particularly the lower internal consistency of the business inquiry could have hurt our credibility—for instance, it was easy to identify us as being affiliated with a university, not with businesspeople. It is plausible that bureaucrats conducted research to find out more about us and, indeed, during the time period when the experiment was conducted, we observed a higher number of visits to the LinkedIn profile of one of the authors of this study by Polish citizens. If such background research was conducted by municipalities, inconsistencies to our inquiry could have been discovered, making it less credible. Consistent with our theory, municipalities with higher levels of EU funding, i.e. those with higher levels of local state capacity, could have had more resources to conduct research on our backgrounds and consequently assess the credibility of our inquiry as lower.

6.3 Possible Discrimination Channel 3: “The Academic Inquiry More Closely Resembles a Typical Access to Public Information Inquiry”

Although we intentionally did not invoke the “Access to Public Information” act, and the content of our inquiry did not fully meet the criteria stipulated in it,¹³ it is nevertheless possible that our academic inquiry more closely resembles typical inquiries made under this law. Thus, some municipalities could have assessed the two types of inquiries differently based on the cost of not responding. In a case of non-response, when the law is invoked, we had the theoretical possibility of taking legal action. This mechanism is consistent with our theoretical argument that municipalities that received higher level of EU funding would have a higher discrimination capacity.

6.4 Possible Discrimination Channel 4: “Municipalities with High State Capacity were Better Able to Analyze the Contents of the Inquiry as not Relevant to their Municipality”

While assignment to the different survey conditions was entirely random, meaning that the fundamental characteristics of municipalities did not systematically differ between the types of inquiry, municipalities with high state capacity might have been able to better assess the relevance of the substantive questions to their local conditions. We received a substantial number of replies, which indicated that such an assessment had been made and the non-

¹³For instance, we requested information on the local costs of electricity, although municipalities may not be involved in setting those prices.

response had been due to the fact that the content of the inquiry was understood as not relevant to the municipality. The successful completion of such an assessment would show that state capacity was successfully used to identify less relevant inquiries.

6.5 Alternative Explanation 1: “Economically Developed Municipalities have Fewer Incentives to Attract Further Private Investments”

One possible explanation for the observed patterns is that economically highly developed municipalities may have seen it as less pressing to cooperate with an inquiry from *Invest-in-Poland-Now.com*. At the same time, it is plausible that more developed municipalities are also more successful at attracting EU funding, making it crucial to control for various economic indicators to avoid omitted variable bias. To address this alternative explanation, we have made a rigorous attempt to include a large number of variables reflecting levels of economic development, including corporate income tax revenues, firm density, unemployment rates, and others. A complete list is in the previous section.

6.6 Alternative Explanation 2: “EU Funding Crowds Out the Demand for Private Investment”

Alternatively, EU funding itself could have a crowding-out effect, where it presents a substitute to private investment. This mechanism is similar to the previous one, but runs independently from the respective municipality’s economic situation. However, there are multiple crucial differences between EU funds and private investment, making this an un-

likely explanation for the observed patterns. First, EU funding is centered on a range of areas that are not directly comparable to private business activity (such as public infrastructure, public education, etc.). Moreover, there is a known and fixed goal of EU funding, which is to promote the convergence of average living standards across the EU. Once geographic areas get closer to the average living standards, EU structural funding will cease. Private investment, on the other hand, is likely to create business activity that is more sustainable in the long run. Local municipalities are likely aware of these significant differences between EU funding and private investment, meaning that it is improbable for these two types of investment to be considered substitutes.

6.7 Summary

Four channels could explain the observed discriminatory patterns. First, municipalities with high levels of EU funding may have developed their own administrative structures to promote private investment. Second, they could also have more resources to conduct research on our backgrounds, revealing that we are primarily affiliated with a university, not a business portal, and hurting the business inquiry's credibility. Third, municipalities with higher state capacity might more quickly identify the potential legal costs of not responding to inquiries resembling access to information requests. Finally, they may also be more effective at assessing whether or not an inquiry is relevant to them. Ultimately, we have no definitive answer as to which of the four channels is at work in a randomly chosen municipality. However, our anecdotal evidence points to the special importance of the first and fourth channels. Finally, we have also presented arguments against two alternative explanations.

7 Conclusion

There are intense debates regarding the effectiveness of development aid in general and its impact on state capacity in particular. This study directly speaks to these debates by investigating the effect of EU structural funds on two specific types of state capacity. Theoretically, the open and competitive structure of EU funding could be a key contributor to its expected positive effect on bureaucratic capabilities.

We find that the EU’s financial aid has a positive impact on the capability to discriminate between different types of inquiries. Municipalities that received high levels of EU funding were able to mobilize more resources and respond more quickly and comprehensively to our academic inquiry than municipalities with low levels of EU funding. At the same time, they effectively discriminate against the business inquiry. We have outlined four possible mechanisms that could explain the observed patterns. However, we do not find sufficient evidence for the hypothesis that information provision capacity more generally has improved. How can this circumstance be explained? The most likely explanation is that excess bureaucratic capacity that was initially created through EU funding has already been assigned to specific new functions, but that, nevertheless, existing bureaucratic resources are utilized *more efficiently* as a result of *improved processes*, resulting in effective discrimination.

Broadly speaking, our study is more in line with previous results that suggest a positive effect of external financial assistance on the building of state capacity (Goldsmith, 2001; Kim et al., 2013; Levine, 2004). Our findings are also compatible with the results of Jones and Tarp (2016), who find that governance aid¹⁴ has a positive effect on the quality of public

¹⁴Jones and Tarp (2016, 270) define *governance aid* as all forms of aid that cover the “strengthening of government policies and plans, public sector and civil society, institutional development, as well as human rights and conflict prevention activities.”

institutions. Furthermore, this contribution speaks to [Dietrich \(2014\)](#) who shows that the quality of existing institutions matters for the effectiveness of aid. Similarly, the results echo a study by [Knack and Rahman \(2007\)](#), who suggest that donor fragmentation can lead to a deterioration of bureaucratic quality in recipient countries. Even though the EU is a complex and multi-tiered system of governance, its aid programs are relatively coherent in design and application.

Although [Krasner and Risse \(2014\)](#) are focused on “weak states,” some of the conditions that they suggest for the effectiveness of aid could also apply in the case of Poland. Specifically, they claim that (1) legitimacy, (2) task complexity, and (3) institutionalization affect whether development assistance has a positive impact. Funding provided by the EU was arguably associated with high degrees of legitimacy and institutionalization.

Our findings contradict not only contributions that suggest an exclusively negative effect of aid, but also some that propose a conditional effect. For instance, [Selaya and Thiele \(2012\)](#) argue that the delivery mode matters, finding that grants have a negative effect when compared to loans. However, we generally find positive effects of funding highly comparable to “grants.” Furthermore, other than [Ugur \(2013\)](#), we find that—even after EU accession—there are still significant positive effects on new member states in the quality of governance.

In short, our results show that external financial assistance does not necessarily have negative effects. Instead, it can have positive long-term effects on the bureaucratic capacity of public administrations, specifically in terms of the capability to evaluate different kinds of inquiries and adjusting the mobilized resources. Having gained some new insights through this study, a next step would be to analyze if these findings about competitively distributed types of development aid also hold in other national and cultural contexts.

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A Appendix

This appendix includes additional empirical evidence and further discusses claims that were made in the paper. In section [A.1](#), we present descriptive statistics. In section [A.2](#), we show the results of comparisons between the randomly selected inquiry groups. In section [A.3](#), we detail the four inquiries and their content. In section [A.4](#), we discuss the questions based on which our dependent variables were coded. In section [A.6](#), we show additional results using two alternative dependent variables. In section [A.7](#), we present the results when using alternative measures of EU funding as the main independent variable.

A.1 Descriptive Statistics

Table A1 shows descriptive statistics of all variables that we use in our empirical test, both in the main body of the paper and in the appendix.

Table A1: Descriptive Statistics

	N	Mean	σ	Min	Max
Responded (Substantive)	2448	0.221	0.415	0	1
Questions Answered (Share)	2448	0.196	0.379	0	1
Bureaucrats Working on Answer (Share)	2423	0.0180	0.0443	0	0.333
Time to Respond (Days)	2448	31.29	9.615	0	36
Departments Working on Answer (Share)	2390	0.0923	0.224	0	1
Business Inquiry	2448	0.504	0.500	0	1
Extensive Inquiry	2448	0.495	0.500	0	1
EU Revenues PC (2010-2017) (Log.)	2448	7.155	0.673	2.998	10.38
EU Revenues PC (2010-2015) (Log.)	2448	7.037	0.700	2.607	10.13
EU Revenues PC (2006-2017) (Log.)	2370	7.322	0.649	4.739	10.39
EU Revenues PC (No outl) (Log.)	2444	7.151	0.665	2.998	9.092
Austria	2448	0.147	0.354	0	1
Russia	2448	0.444	0.497	0	1
Interwar Poland	2448	0.744	0.437	0	1
Firm Density	2448	4.618	2.717	0.447	27.95
EU Revenues PC (Log.): Residuals	2447	-3.28e-10	0.605	-3.628	2.758
Corporate Income Tax Rev. PC	2448	22.86	62.18	-43.19	2024.8
Population Density	2448	221.1	463.8	4.367	3991.2
Unemployment Rate	2448	5.434	2.723	0.970	18.17
Avg. Monthly Salary (%)	2448	83.50	9.414	65.40	166
Net Migration	2448	-0.730	6.187	-20.80	46.95
Working Age Pop. (%)	2448	62.08	1.753	46.90	68.60
In/Out Commuter	2347	0.613	1.722	0	70.05
Population (Log.)	2448	9.080	0.829	7.172	14.38
Mayor SLD	2445	0.0286	0.167	0	1
Mayor PO	2445	0.0834	0.277	0	1
Mayor PSL	2445	0.177	0.381	0	1
Mayor PiS	2445	0.0695	0.254	0	1
Mayor Higher Ed.	2445	0.904	0.294	0	1
E-mail Inquiry by Municipality	2448	0.0261	0.160	0	1
Reminder E-mail Sent	2448	0.904	0.294	0	1
Avg. Total Tax Revenues (1999-2003) (Log.)	2447	16.23	0.851	14.63	22.33
Avg. Total Population (1999-2003) (Log.)	2447	9.069	0.811	7.169	14.33
County Seat (1999-2003)	2447	0.0270	0.162	0	1

A.2 Mean Comparisons Between Inquiry Groups

Tables A2 and A3 compare the mean values of various variables for the academic vs. business inquiry and the extensive vs. shorter inquiries in order to verify whether the randomly selected groups of municipalities are indeed statistically indistinguishable. The comparison shows that, for the vast majority of variables, the difference in means is not statistically significant.

There are three minor exceptions to this pattern. In Table A2, there is a statistically significant difference in *Average Monthly Salary* between the academic and business inquiry groups. This difference is, however, negligible in magnitude (less than PLN 48 / \$13 per month) and should therefore not be of concern. In Table A3, there is a statistically significant difference in *EU Rev (Log)* and *Mayor Party Affiliation* being *PSL*. For the former, similarly, the magnitude of the difference is extremely small and therefore not a concern. The latter, however, has a more pronounced difference: Municipalities that received the shorter inquiry are more likely (4 percentage points) to have a mayor affiliated with PSL.

In sum, while there might be statistically significant differences in a small number of variables (that are unlikely to affect our results), in all other ways, the inquiry groups are statistically indistinguishable.

Table A2: Mean Comparison: Academic vs. Business Inquiry

	Academic Mean	Business Mean	Difference
Total Population	14851.2	16259.8	-1408.6 (-0.68)
Urban Share	24.79	23.62	1.167 (0.81)
EU Revenues PC (2010-2017) (Log.)	7.146	7.164	-0.0177 (-0.65)
Unemployment Rate	5.518	5.351	0.167 (1.51)
Avg. Monthly Salary (%)	82.97	84.02	-1.052** (-2.77)
Corporate Income Tax Rev. PC	23.63	22.10	1.525 (0.61)
Firm Density	4.641	4.595	0.0462 (0.42)
Germany	0.410	0.407	0.00244 (0.12)
Russia	0.433	0.456	-0.0231 (-1.15)
Austria	0.157	0.137	0.0206 (1.44)
Net Migration	-0.943	-0.522	-0.421 (-1.68)
Working Age Pop. (%)	62.10	62.06	0.0390 (0.55)
In/Out Commuter	0.620	0.606	0.0132 (0.19)
Mayor SLD	0.0289	0.0284	0.000445 (0.07)
Mayor PO	0.0824	0.0844	-0.00198 (-0.18)
Mayor PSL	0.187	0.166	0.0207 (1.34)
Mayor PiS	0.0651	0.0739	-0.00874 (-0.85)
Mayor Higher Ed.	0.908	0.900	0.00833 (0.70)
N	1,213	1,235	

t statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A3: Mean Comparison: Shorter vs. Extensive Inquiry

	Shorter Mean	Extensive Mean	Difference
Total Population	16970.0	14125.8	2844.2 (1.38)
Urban Share	24.08	24.32	-0.247 (-0.17)
EU Revenues PC (2010-2017) (Log.)	7.182	7.128	0.0540* (1.98)
Unemployment Rate	5.421	5.447	-0.0261 (-0.24)
Avg. Monthly Salary (%)	83.56	83.44	0.112 (0.29)
Corporate Income Tax Rev. PC	22.91	22.80	0.116 (0.05)
Firm Density	4.567	4.670	-0.103 (-0.94)
Germany	0.394	0.423	-0.0293 (-1.47)
Russia	0.464	0.425	0.0387 (1.93)
Austria	0.142	0.152	-0.00942 (-0.66)
Net Migration	-0.673	-0.789	0.116 (0.46)
Working Age Pop. (%)	62.03	62.14	-0.112 (-1.57)
In/Out Commuter	0.577	0.649	-0.0721 (-1.01)
Mayor SLD	0.0284	0.0289	-0.000539 (-0.08)
Mayor PO	0.0835	0.0834	0.0000662 (0.01)
Mayor PSL	0.197	0.156	0.0409** (2.65)
Mayor PiS	0.0632	0.0760	-0.0128 (-1.24)
Mayor Higher Ed.	0.898	0.911	-0.0129 (-1.09)
N	1,236	1,212	

t statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A.3 Four Different Types of Inquiries

In total, there were four different survey conditions to which municipalities were assigned randomly. Particularly with respect to the distinction between the academic and the business inquiry, we went to great lengths to make them as different as possible.

Table A4 provides an overview of the four different survey conditions. The inquiry emails with their detailed contents follow below.

Table A4: Different Types of Inquiries in the Randomized Survey

	Extensive Inquiry	Shorter Inquiry
Business Inquiry	Survey Condition A E-Mail Inquiry No. 1	Survey Condition C E-Mail Inquiry No. 3
Academic Inquiry	Survey Condition B E-Mail Inquiry No. 2	Survey Condition D E-Mail Inquiry No. 4

A.3.1 E-Mail Inquiry No. 1 (Business & Extensive)

The following introductory email was associated with survey condition A:

“Dear Sir or Madam,

We are affiliated with the website Invest-in-Poland-Now and we would like to inquire data from you. The information that we collect is likely to be relevant to businesses who intend to invest in municipalities across Poland. Thus, we plan to make it available to firms through our website [LINK EMBEDDED HERE]. Therefore, your participation in this project could attract investment by both domestic and international investors, lower local unemployment, and promote economic growth in your area.

In addition to some general information about your local public administration (such as contact details, type of the municipality, population size), we would like to request multiple pieces of information that are highly relevant to businesses. First, to complement data about your municipality that we have already obtained, we would like to request additional information on the total land area that is available for new construction projects in your municipality and that will become available in the next two years. Second, we would like to request information on local taxes, the average or typical costs of electricity and water, and whether your municipality has access to the natural-gas network.

Information on these issues is of great relevance to businesses that might want to invest in your municipality. The total land area available for construction is an important factor in decisions related to building new factories, businesses, etc. Local taxes as well as the costs of water, electricity, and other services are similarly important to firms to make long-term calculations about investments. To see the exact questions, please open the survey using the link below. Please note that the survey can be completed in multiple stages—your answers will be saved automatically, and you can just close the survey at any time and return later to complete it.

These data will be made available on our website called Invest-In-Poland-Now, which will be made accessible to the public, most importantly domestic and international investors. Additionally, information from this survey will be used for a research project. This is the link to the website:

[LINK TO THE WEBSITE INVEST-IN-POLAND-NOW](#)

This website is meant to provide data to investors who are interested in creating business activity. Thus, the information you provide will be made available to the public. It is possible that investment decisions made by domestic or international investors will contribute to economic growth and lower unemployment in your municipality. To promote and advertise this website, we intend to contact a number of business magazines, websites, and blogs in Poland, Europe, and the rest of the world.

We ask you to provide an email address if there are any follow-up questions and you may provide a personal email address here (if you wish to do so). Please note that, if the data will be published in the future, there will be no email addresses included, so this piece of information will not be made available to the public. The following link provides some additional information on the research project:

[LINK TO THE INFORMATION SHEET](#)

If you have any questions on the project or the survey, please contact Paweł Charasz (info@invest-in-poland-now.com).

Below you will find a link that allows you to submit your replies via an electronic form. Please use this electronic form to view the questions and to submit your answers. (If it is impossible for you to provide the answers via the electronic form, please send them by email. However, it would be strongly preferable if you can use the survey to provide the answers.)

For participating in the survey, please do not reply directly to this email, but submit your reply through the following link:

[LINK TO THE SURVEY](#)

If possible, please respond to this survey by October 23 of this year. If it not possible for you to reply by this date, please kindly send us a short notification.

Please do not forget that your participation in this survey may attract domestic or international investments and could thereby lower local unemployment and promote economic growth. Thank you very much in advance.

Best regards,

The Team of Invest-in-Poland-Now*

—

Please do not print this email to save the environment.

*A Website Created by Paweł Charasz and Jan Vogler
(Duke University, Durham, North Carolina, USA)”

A.3.2 E-Mail Inquiry No. 2 (Academic & Extensive)

The following introductory email was associated with survey condition B:

“Dear Sir or Madam,

We are researchers at Duke University (Durham, North Carolina, United States of America) and we conduct a research project on the “External and Internal Determinants of State Capacity.”

In addition to some general information about your local public administration (such as contact details, type of the municipality, population size), we would like to request two additional sets of information. First, to complement data about your municipality that we have already obtained, we would like to request additional information on the total land area that is available for new construction projects in your municipality and that will become available in the next two years. Second, we would like to request information on local taxes, the average or typical costs of electricity and water, and whether your municipality has access to the natural-gas network. To see the exact questions, please open the survey using the link below. Please note that the survey can be completed in multiple stages—your answers will be saved automatically, and you can just close the survey at any time and return later to complete it.

Information from this survey will be used for a research project on the “External and Internal Determinants of State Capacity.” Additionally, we will make this data available on a website called Invest-In-Poland-Now. A link to this website is included in the information sheet. Thus, the information you provide will be made available to the public.

We ask you to provide an email address if there are any follow-up questions and you may provide a personal email address here (if you wish to do so). Please note that, if the data will be published in the future, there will be no email addresses included, so this piece of information will not be made available to the public. The following link provides some additional information on the research project:

[LINK TO THE INFORMATION SHEET](#)

If you have any questions on the research project or the survey, please contact Paweł Charasz (pawel.charasz@duke.edu).

If you have any questions related to your participation in this survey, please contact Duke University’s institutional review board (campusirb@duke.edu, +1-919-684-3030).

Below you will find a link that allows you to submit your replies via an electronic form. Please use this electronic form to view the questions and to submit your answers. (If it is impossible for you to provide the answers via the electronic form, please send them by email. However, it would be strongly preferable if you can use the survey to provide the answers.)

For participating in the survey, please do not reply directly to this email, but submit your reply through the following link:

[LINK TO THE SURVEY](#)

If possible, please respond to this survey by October 23 of this year. If it not possible for you to reply by this date, please kindly send us a short notification.

Your participation in this survey will be very important for the success of the research project. Thank you very much in advance.

Best regards,

Paweł Charasz and Jan Vogler

(Duke University, Durham, North Carolina, USA)”

A.3.3 E-Mail Inquiry No. 3 (Business & Shorter)

The following introductory email was associated with survey condition C:

“Dear Sir or Madam,

We are affiliated with the website Invest-in-Poland-Now and we would like to inquire data from you. The information that we collect is likely to be relevant to businesses who intend to invest in municipalities across Poland. Thus, we plan to make it available to firms through our website [LINK EMBEDDED HERE]. Therefore, your participation in this project could attract investment by both domestic and international investors, lower local unemployment, and promote economic growth in your area.

In addition to some general information about your local public administration (such as contact details, type of the municipality, population size), we would like to request two pieces of information that are highly relevant to businesses. To complement data about your municipality that we have already obtained, we would like to request information on the total land area that is available for new construction projects in your municipality and that will become available in the next two years.

Information on this issue is of great relevance to businesses that might want to invest in your municipality. The total land area available for construction is an important factor in decisions related to building new factories, businesses, etc. To see the exact questions, please open the survey using the link below. Please note that the survey can be completed in multiple stages—your answers will be saved automatically, and you can just close the survey at any time and return later to complete it.

These data will be made available on our website called Invest-In-Poland-Now, which will be made accessible to the public, most importantly domestic and international investors. Additionally, information from this survey will be used for a research project. This is the link to the website:

LINK TO THE WEBSITE INVEST-IN-POLAND-NOW

This website is meant to provide data to investors who are interested in creating business activity. Thus, the information you provide will be made available to the public. It is possible that investment decisions made by domestic or international investors will contribute to economic growth and lower unemployment in your municipality. To promote and advertise this website, we intend to contact a number of business magazines, websites, and blogs in Poland, Europe, and the rest of the world.

We ask you to provide an email address if there are any follow-up questions and you may provide a personal email address here (if you wish to do so). Please note that, if the data will be published in the future, there will be no email addresses included, so this piece of information will not be made available to the public. The following link provides some additional information on the research project:

LINK TO THE INFORMATION SHEET

If you have any questions on the project or the survey, please contact Paweł Charasz (info@invest-in-poland-now.com).

Below you will find a link that allows you to submit your replies via an electronic form. Please use this electronic form to view the questions and to submit your answers. (If it is impossible for you to provide the answers via the electronic form, please send them by email. However, it would be strongly preferable if you can use the survey to provide the answers.)

For participating in the survey, please do not reply directly to this email, but submit your reply through the following link:

LINK TO THE SURVEY

If possible, please respond to this survey by October 23 of this year. If it not possible for you to reply by this date, please kindly send us a short notification.

Please do not forget that your participation in this survey may attract domestic or international investments and could thereby lower local unemployment and promote economic growth. Thank you very much in advance.

Best regards,
The Team of Invest-in-Poland-Now*

—

Please do not print this email to save the environment.

*A Website Created by Paweł Charasz and Jan Vogler
(Duke University, Durham, North Carolina, USA)”

A.3.4 E-Mail Inquiry No. 4 (Academic & Shorter)

The following introductory email was associated with survey condition D:

“Dear Sir or Madam,

We are researchers at Duke University (Durham, North Carolina, United States of America) and we conduct a research project on the “External and Internal Determinants of State Capacity.”

In addition to some general information about your local public administration (such as contact details, type of the municipality, population size), we would like to request two additional sets of information. To complement data about your municipality that we have already obtained, we would like to request information on the total land area that is available for new construction projects in your municipality and that will become available in the next two years. To see the exact questions, please open the survey using the link below. Please note that the survey can be completed in multiple stages—your answers will be saved automatically, and you can just close the survey at any time and return later to complete it.

Information from this survey will be used for a research project on the “External and Internal Determinants of State Capacity”. Additionally, we will make this data available on a website called Invest-In-Poland-Now. A link to this website is included in the information sheet. Thus, the information you provide will be made available to the public.

We ask you to provide an email address if there are any follow-up questions and you may provide a personal email address here (if you wish to do so). Please note that, if the data will be published in the future, there will be no email addresses included, so this piece of information will not be made available to the public. The following link provides some additional information on the research project:

[LINK TO THE INFORMATION SHEET](#)

If you have any questions on the research project or the survey, please contact Paweł Charasz (pawel.charasz@duke.edu).

If you have any questions related to your participation in this survey, please contact Duke University's institutional review board (campusirb@duke.edu, +1-919-684-3030).

Below you will find a link that allows you to submit your replies via an electronic form. Please use this electronic form to view the questions and to submit your answers. (If it is impossible for you to provide the answers via the electronic form, please send them by email. However, it would be strongly preferable if you can use the survey to provide the answers.)

For participating in the survey, please do not reply directly to this email, but submit your reply through the following link:

[LINK TO THE SURVEY](#)

If possible, please respond to this survey by October 23 of this year. If it not possible for you to reply by this date, please kindly send us a short notification.

Your participation in this survey will be very important for the success of the research project. Thank you very much in advance.

Best regards,

Paweł Charasz and Jan Vogler

(Duke University, Durham, North Carolina, USA)”

A.3.5 Information Sheet (Same Across All Survey Conditions)

The following information sheet was attached to all four introductory emails.

Information Sheet Invest-in-Poland-Now (The External and Internal Determinants of State Capacity)

[DUKE UNIVERSITY LOGO]

[INVEST-IN-POLAND-NOW LOGO]

Thank you for your interest in this project. The project is primarily conducted by Paweł Charasz, M.A. (pawel.charasz@duke.edu), and Jan Vogler, M.Sc. (jan.vogler@duke.edu), under the supervision of Professor Mathew D. McCubbins (mathew.mccubbins@duke.edu).

This research project deals with data that is relevant to private investors and the external and internal determinants of state capacity. In the case of Poland, a survey is meant to be sent out to local public administrations at the level of the municipality (“gmina”). Additionally, as mentioned in our email, the data from this project will be made available on a website called Invest-In-Poland-Now [LINK].

If you have any questions on the research project or the survey, please contact Paweł Charasz (info@invest-in-poland-now.com or pawel.charasz@duke.edu).

Thank you again for your interest.

A.3.6 The Website: Invest-In-Poland-Now.com

Our website was a crucial component of the business inquiry. It can be found here: www.invest-in-poland-now.com.

It was made available in two languages: Polish and English. Users had the possibility to switch between those two language options. The main page included information such as the mission statement of *Invest-in-Poland-Now.com* and its corporate branding. The website was then divided into subsections: “Why Poland?,” “Relevance,” “Ranking,” and “Contact Us.”

The first subsection, “Why Poland?,” was meant to introduce Poland as an investment destination, and emphasized six aspects of investment attractiveness: (1) the educated labor force, (2) the business-friendly environment, (3) the transportation infrastructure, (4) the strong economic performance, (5) general cost effectiveness, and (6) the geographic location of Poland.

In the “Relevance” subsection, we explained why the data that we intend to present on the website may be relevant to potential investors.

The “Ranking” page informed the viewer that our data collection process is underway and that we will eventually publish the collected data there.

Finally, the “Contact Us” subsection contained an email address for general inquiries, as well as a contact form for media inquiries.

A.4 The Coding of the Dependent Variables

The three dependent variables (1) **Responded (Substantive)**, (2) **Proportion Answered**, and (3) **Response Time** were coded by us based on the data we had collected.

The two other dependent variables were coded based on the answers that were given by the respective public administration. Details follow below.

(1) Bureaucrats Working on Answer

This variable was coded based on answers to the following to questions:

FIRST QUESTION: “How many employees does your local public administration have in total? Please provide the exact number if you can. If you cannot provide the exact number, please provide an approximation.

Open-ended question (numerical entry)”

SECOND QUESTION: “How many people participated in filling out this survey? If you cannot provide an exact number, please provide an approximation.

Open-ended question (numerical entry)”

(2) Departments Working on Answer

This variable was coded based on answers to the following to questions:

FIRST QUESTION: “How many departments of the local public administration participated in filling out this survey?

Open-ended question (numerical entry)”

SECOND QUESTION: “How many departments does your local public administration have in total?

Open-ended question (numerical entry)”

A.5 Additional Empirical Results — Information Capacity: Response Time

Table A5: Information Capacity: Cox Proportional-Hazards Model for Time to Respond

	Time to Respond (Days)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.)	0.979 (0.062)	1.005 (0.066)	1.012 (0.067)	0.950 (0.066)	0.962 (0.070)
Business Inquiry	0.587*** (0.052)	0.579*** (0.052)	0.582*** (0.053)	0.740** (0.069)	0.748** (0.070)
Extensive Inquiry	1.157 (0.101)	1.193* (0.106)	1.197* (0.106)	1.084 (0.095)	1.084 (0.096)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2430	2330	2330	2330	2330
χ^2	38.38	107.34	111.00	74.84	100.14
Pseudo Log-Likelihood	-4028.461	-3890.989	-3890.989	-3890.989	-3890.989

Exponentiated coefficients (Hazard ratios); t statistics in parentheses. Constant term has been omitted.
 * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A.6 Additional Empirical Results: Alternative Measures of the Dependent Variable

This section replicates our previous analyses using two alternative dependent variables:

Proportion Answered: This is a continuous variable, bound between 0 and 1, and measures the proportion of substantive questions that were answered by the local public administration. We code public administrations that have not answered any question as 0.

Departments Working on Answer: Similarly, this variable measures the number of departments (as a proportion of the overall number of departments) that a local public administration devoted to responding to our inquiry.

A.6.1 Baseline Model, ADV1: Proportion of Questions Answered

Table A6: Information Capacity: Tobit Estimates for Share of Questions Answered

	Questions Answered (Share)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.)	-0.041 (0.112)	0.019 (0.114)	0.026 (0.115)	0.073 (0.090)	0.063 (0.094)
Business Inquiry				-0.516*** (0.125)	-0.502*** (0.124)
Extensive Inquiry				0.062 (0.121)	0.069 (0.120)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2448	2346	2346	2346	2346
F	0.14	2.86	2.59	12.13	7.32
Pseudo R ²	0.000	0.014	0.015	0.205	0.209

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0, right-censored at 1. * p<0.05, ** p<0.01, *** p<0.001

Table A7: Discrimination capacity: Tobit Estimates for Share of Questions Answered

	Questions Answered (Share)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.)	0.237 (0.150)	0.315* (0.152)	0.326* (0.153)	0.305* (0.125)	0.286* (0.127)
Business Inquiry	3.445* (1.604)	3.795* (1.613)	3.846* (1.617)	3.128* (1.268)	3.041* (1.261)
Business Inquiry × EU Revenues PC (Log.)	-0.613** (0.224)	-0.663** (0.226)	-0.669** (0.227)	-0.510** (0.178)	-0.496** (0.177)
Extensive Inquiry	0.147 (0.151)	0.186 (0.151)	0.191 (0.151)	0.065 (0.120)	0.071 (0.120)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2448	2346	2346	2346	2346
F	10.54	4.36	3.85	11.64	7.15
Pseudo R ²	0.014	0.029	0.030	0.207	0.211

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0, right-censored at 1. * p<0.05, ** p<0.01, *** p<0.001

A.6.2 Baseline Model, ADV2: Departments Working on Answer

Table A8: Information Capacity: Tobit Estimates for Share of Departments Working on Inquiry

	Departments Working on Answer (Share)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.)	0.004 (0.030)	0.016 (0.031)	0.018 (0.032)	0.028 (0.026)	0.024 (0.028)
Business Inquiry				-0.158*** (0.036)	-0.152*** (0.036)
Extensive Inquiry				0.055 (0.036)	0.057 (0.035)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2390	2291	2291	2291	2291
F	0.02	2.32	2.36	38.39	23.06
Pseudo R ²	0.000	0.011	0.014	0.234	0.240

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.
 * p<0.05, ** p<0.01, *** p<0.001

Table A9: Discrimination Capacity: Tobit Estimates for Share of Departments Working on Inquiry

	Departments Working on Answer (Share)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.)	0.074 (0.040)	0.089* (0.041)	0.092* (0.041)	0.097** (0.037)	0.091* (0.037)
Business Inquiry	0.847* (0.429)	0.929* (0.438)	0.945* (0.440)	0.928* (0.361)	0.917* (0.357)
Business Inquiry × EU Revenues PC (Log.)	-0.154* (0.060)	-0.166** (0.061)	-0.167** (0.061)	-0.152** (0.051)	-0.150** (0.050)
Extensive Inquiry	0.059 (0.042)	0.062 (0.042)	0.065 (0.042)	0.056 (0.036)	0.057 (0.035)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2390	2291	2291	2291	2291
F	10.95	4.30	4.00	37.17	22.74
Pseudo R ²	0.018	0.029	0.031	0.237	0.243

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.
 * p<0.05, ** p<0.01, *** p<0.001

A.6.3 Accounting for Preexisting Capacity, ADV1: Proportion of Questions Answered

Table A10: Information Capacity: Tobit Estimates for Share of Questions Answered Using Residuals

	Questions Answered (Share)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.): Residuals	-0.010 (0.125)	-0.011 (0.126)	-0.012 (0.126)	0.055 (0.098)	0.063 (0.098)
Business Inquiry				-0.516*** (0.125)	-0.501*** (0.124)
Extensive Inquiry				0.061 (0.121)	0.070 (0.120)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2447	2345	2345	2345	2345
F	0.01	2.86	2.60	12.13	7.32
Pseudo R ²	0.000	0.014	0.015	0.204	0.209

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0, right-censored at 1. * p<0.05, ** p<0.01, *** p<0.001

Table A11: Discrimination Capacity: Tobit Estimates for Share of Questions Answered Using Residuals

	Questions Answered (Share)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.): Residuals	0.327 (0.170)	0.338* (0.170)	0.338* (0.170)	0.297* (0.138)	0.303* (0.138)
Business Inquiry	-0.936*** (0.158)	-0.939*** (0.158)	-0.927*** (0.158)	-0.515*** (0.125)	-0.498*** (0.124)
Business Inquiry × EU Revenues PC (Log.): Residuals	-0.745** (0.250)	-0.785** (0.252)	-0.788** (0.252)	-0.535** (0.196)	-0.528** (0.197)
Extensive Inquiry	0.150 (0.151)	0.186 (0.151)	0.190 (0.151)	0.065 (0.120)	0.073 (0.120)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2447	2345	2345	2345	2345
F	10.87	4.38	3.88	11.63	7.14
Pseudo R ²	0.014	0.029	0.030	0.207	0.211

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0, right-censored at 1. * p<0.05, ** p<0.01, *** p<0.001

A.6.4 Accounting for Preexisting Capacity, ADV2: Departments Working on Answer

Table A12: Information Capacity: Tobit Estimates for Share of Departments Working on Inquiry Using Residuals

	Departments Working on Answer (Share)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.): Residuals	0.012 (0.034)	0.012 (0.035)	0.011 (0.035)	0.028 (0.029)	0.031 (0.029)
Business Inquiry				-0.158*** (0.036)	-0.151*** (0.036)
Extensive Inquiry				0.055 (0.036)	0.057 (0.035)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2389	2290	2290	2290	2290
F	0.13	2.30	2.34	38.30	22.95
Pseudo R ²	0.000	0.011	0.014	0.233	0.240

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.
 * p<0.05, ** p<0.01, *** p<0.001

Table A13: Discrimination Capacity: Tobit Estimates for Share of Departments Working on Inquiry Using Residuals

	Departments Working on Answer (Share)				
	(1)	(2)	(3)	(4)	(5)
EU Revenues PC (Log.): Residuals	0.087 (0.046)	0.091 (0.047)	0.091 (0.047)	0.090* (0.041)	0.094* (0.040)
Business Inquiry	-0.253*** (0.042)	-0.253*** (0.042)	-0.248*** (0.042)	-0.157*** (0.036)	-0.150*** (0.036)
Business Inquiry × EU Revenues PC (Log.): Residuals	-0.168* (0.068)	-0.182** (0.069)	-0.182** (0.069)	-0.139* (0.057)	-0.142* (0.057)
Extensive Inquiry	0.060 (0.042)	0.062 (0.042)	0.065 (0.042)	0.056 (0.036)	0.057 (0.035)
Socio-economic Controls	No	Yes	Yes	Yes	Yes
Legacy Controls	No	No	Yes	Yes	Yes
Survey Controls	No	No	No	Yes	Yes
Province FE	No	No	No	No	Yes
Observations	2389	2290	2290	2290	2290
F	11.10	4.32	4.02	36.92	22.52
Pseudo R ²	0.018	0.029	0.031	0.236	0.242

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.
* p<0.05, ** p<0.01, *** p<0.001

A.7 Additional Empirical Results: Alternative Measures of the Independent Variable

To ensure that our results hold across different forms of measuring our key independent variable, we construct the following additional measures:

1. **EU Funding Per Capita 2010-15:** Because administrative reassignment or reorganization can take some time, which could delay the positive impact of EU funding on other functions of the state, here we only consider funding up to the year 2015.
2. **EU Funding Per Capita 2006-17:** Despite the change in coding between 2009 and 2010, it is desirable to evaluate if our results hold when we take the entire observable time period into account. Therefore, we create a version of the independent variable accounting for funding from the year 2006 onwards.
3. **EU Funding Per Capita 2010-17 with outliers removed:** Because a small number of municipalities received extraordinarily high levels of EU funding over the time period 2010-17 (more than PLN 10,000 per capita), we create a fourth measurement in which we remove those outliers.

The following sections replicate our results using the alternative measures.

A.7.1 EU Revenues 2010-15

This section contains results for our EU funding variable from 2010-15.

[Table A14](#) shows the results for information capacity with respect to the first and second dependent variable.

[Table A15](#) shows the results for discrimination capacity with respect to the first and second dependent variable.

[Table A16](#) shows the results for information and discrimination capacity with respect to the third dependent variable.

Table A14: Information Capacity: Estimates for Response and Share of Bureaucrats Working on Inquiry Using Alternative Independent Variable — EU Revenues PC (2010-2015)

	Responded (Substantive)		Bureaucrats Working on Answer (Share)	
	(1) Probit	(2) Probit	(3) Tobit	(4) Tobit
EU Revenues PC (2010-2015) (Log.)	-0.008 (0.040)	0.066 (0.053)	0.002 (0.005)	0.004 (0.005)
Business Inquiry	-0.348*** (0.057)	-0.292*** (0.070)	-0.046*** (0.008)	-0.028*** (0.007)
Extensive Inquiry	0.091 (0.057)	0.112 (0.070)	0.018* (0.008)	0.017* (0.007)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Province FE	No	Yes	No	Yes
Observations	2448	2121	2423	2321
Pseudo Log-Likelihood	-1294.211	-864.464	-470.170	-440.132
Pseudo R ²	0.015	0.072	0.044	0.683

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.

* p<0.05, ** p<0.01, *** p<0.001

Table A15: Discrimination Capacity: Estimates for Response and Share of Bureaucrats Working on Inquiry Using Alternative Independent Variable — EU Revenues PC (2010-2015)

	Responded (Substantive)		Bureaucrats Working on Answer (Share)	
	(1) Probit	(2) Probit	(3) Tobit	(4) Tobit
EU Revenues PC (2010-2015) (Log.)	0.112* (0.055)	0.205** (0.070)	0.018* (0.007)	0.019** (0.007)
Business Inquiry	1.461* (0.571)	1.898** (0.699)	0.193* (0.076)	0.190** (0.063)
Business Inquiry × EU Revenues PC (2010-2015) (Log.)	-0.257** (0.081)	-0.312** (0.099)	-0.034** (0.011)	-0.031*** (0.009)
Extensive Inquiry	0.091 (0.057)	0.114 (0.070)	0.018* (0.008)	0.017** (0.007)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Province FE	No	Yes	No	Yes
Observations	2448	2121	2423	2321
Pseudo Log-Likelihood	-1294.211	-864.464	-470.170	-440.132
Pseudo R ²	0.019	0.077	0.054	0.695

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.
 * p<0.05, ** p<0.01, *** p<0.001

Table A16: Information and Discrimination Capacity: Cox Proportional-Hazards Model for Time to Respond Using Alternative Independent Variable — EU Revenues PC (2010-2015)

	Time to Respond (Days)			
	(1)	(2)	(3)	(4)
EU Revenues PC (2010-2015) (Log.)	0.998 (0.060)	0.969 (0.065)	1.168* (0.089)	1.148 (0.095)
Business Inquiry	0.587*** (0.052)	0.739** (0.069)	9.410** (8.167)	13.755** (12.445)
Extensive Inquiry	1.158 (0.101)	1.086 (0.096)	1.157 (0.101)	1.098 (0.097)
Business Inquiry × EU Revenues PC (2010-2015) (Log.)			0.673** (0.083)	0.658** (0.085)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Observations	2430	2330	2430	2330
χ^2	37.95	73.41	46.66	87.37
Pseudo Log-Likelihood	-4028.461	-3890.989	-4028.461	-3890.989

Exponentiated coefficients (Hazard ratios); t statistics in parentheses. Constant term has been omitted.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A.7.2 EU Revenues 2006-17

This section contains results for our EU revenues 2006-17 variable.

Table A17 shows the results for information capacity with respect to the first and second dependent variable.

Table A18 shows the results for discrimination capacity with respect to the first and second dependent variable.

Table A19 shows the results for information and discrimination capacity with respect to the third dependent variable.

Table A17: Information Capacity: Estimates for Response and Share of Bureaucrats Working on Inquiry Using Alternative Independent Variable — EU Revenues PC (2006-2017)

	Responded (Substantive)		Bureaucrats Working on Answer (Share)	
	(1) Probit	(2) Probit	(3) Tobit	(4) Tobit
EU Revenues PC (2006-2017) (Log.)	-0.017 (0.044)	0.053 (0.058)	-0.001 (0.006)	0.003 (0.005)
Business Inquiry	-0.351*** (0.058)	-0.296*** (0.071)	-0.047*** (0.008)	-0.028*** (0.007)
Extensive Inquiry	0.099 (0.058)	0.111 (0.071)	0.019* (0.008)	0.017** (0.007)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Province FE	No	Yes	No	Yes
Observations	2370	2053	2345	2248
Pseudo Log-Likelihood	-1265.759	-850.372	-451.679	-422.752
Pseudo R ²	0.016	0.071	0.047	0.689

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.

* p<0.05, ** p<0.01, *** p<0.001

Table A18: Discrimination capacity: Estimates for Response and Share of Bureaucrats Working on Inquiry Using Alternative Independent Variable — EU Revenues PC (2006-2017)

	Responded (Substantive)		Bureaucrats Working on Answer (Share)	
	(1) Probit	(2) Probit	(3) Tobit	(4) Tobit
EU Revenues PC (2006-2017) (Log.)	0.075 (0.059)	0.176* (0.075)	0.010 (0.008)	0.014* (0.007)
Business Inquiry	1.128 (0.650)	1.772* (0.787)	0.134 (0.086)	0.165* (0.070)
Business Inquiry × EU Revenues PC (2006-2017) (Log.)	-0.202* (0.089)	-0.283** (0.107)	-0.025* (0.012)	-0.027** (0.010)
Extensive Inquiry	0.098 (0.058)	0.112 (0.071)	0.019* (0.008)	0.017** (0.007)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Province FE	No	Yes	No	Yes
Observations	2370	2053	2345	2248
Pseudo Log-Likelihood	-1265.759	-850.372	-451.679	-422.752
Pseudo R ²	0.018	0.075	0.052	0.696

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.
* p<0.05, ** p<0.01, *** p<0.001

Table A19: Information and Discrimination Capacity: Cox Proportional-Hazards Model for Time to Respond Using Alternative Independent Variable — EU Revenues PC (2006-2017)

	Time to Respond (Days)			
	(1)	(2)	(3)	(4)
EU Revenues PC (2006-2017) (Log.)	0.981 (0.064)	0.953 (0.068)	1.102 (0.091)	1.112 (0.099)
Business Inquiry	0.589*** (0.053)	0.740** (0.069)	5.337 (5.241)	12.599* (12.652)
Extensive Inquiry	1.166 (0.102)	1.085 (0.096)	1.163 (0.102)	1.093 (0.098)
Business Inquiry × EU Revenues PC (2006-2017) (Log.)			0.740* (0.099)	0.678** (0.094)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Observations	2353	2258	2353	2258
χ^2	37.45	135117.34	41.21	83.59
Pseudo Log-Likelihood	-3964.414	-3828.183	-3964.414	-3828.183

Exponentiated coefficients (Hazard ratios); t statistics in parentheses. Constant term has been omitted.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A.7.3 EU Revenues 2010-17 (Outliers Removed)

This section contains results for EU revenues 2010-2017 with outliers removed (observations with more than PLN 10,000 in EU funding per capita).

Table A20 shows the results for information capacity with respect to the first and second dependent variable.

Table A21 shows the results for discrimination capacity with respect to the first and second dependent variable.

Table A22 shows the results for information and discrimination capacity with respect to the third dependent variable.

Table A20: Information Capacity: Estimates for Response and Share of Bureaucrats Working on Inquiry Using Alternative Independent Variable — EU Revenues PC (2010-2017) (Outliers Removed)

	Responded (Substantive)		Bureaucrats Working on Answer (Share)	
	(1) Probit	(2) Probit	(3) Tobit	(4) Tobit
EU Revenues PC (No outl) (Log.)	-0.019 (0.042)	0.061 (0.057)	-0.000 (0.006)	0.003 (0.005)
Business Inquiry	-0.352*** (0.057)	-0.293*** (0.070)	-0.047*** (0.008)	-0.028*** (0.007)
Extensive Inquiry	0.088 (0.057)	0.111 (0.070)	0.018* (0.008)	0.017* (0.007)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Province FE	No	Yes	No	Yes
Observations	2444	2118	2419	2317
Pseudo Log-Likelihood	-1291.952	-864.006	-470.024	-440.002
Pseudo R ²	0.016	0.072	0.044	0.681

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.
 * p<0.05, ** p<0.01, *** p<0.001

Table A21: Discrimination Capacity: Estimates for Response and Share of Bureaucrats Working on Inquiry Using Alternative Independent Variable — EU Revenues PC (2010-2017) (Outliers Removed)

	Responded (Substantive)		Bureaucrats Working on Answer (Share)	
	(1) Probit	(2) Probit	(3) Tobit	(4) Tobit
EU Revenues PC (No outl) (Log.)	0.106 (0.058)	0.199** (0.075)	0.016* (0.008)	0.017* (0.007)
Business Inquiry	1.583** (0.610)	1.919* (0.755)	0.201* (0.082)	0.190** (0.069)
Business Inquiry × EU Revenues PC (No outl) (Log.)	-0.271** (0.085)	-0.310** (0.105)	-0.035** (0.011)	-0.031** (0.010)
Extensive Inquiry	0.087 (0.057)	0.113 (0.070)	0.017* (0.008)	0.017** (0.007)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Province FE	No	Yes	No	Yes
Observations	2444	2118	2419	2317
Pseudo Log-Likelihood	-1291.952	-864.006	-470.024	-440.002
Pseudo R ²	0.019	0.076	0.054	0.691

Robust standard errors in parentheses. Constant term has been omitted. Tobit model left-censored at 0.
* p<0.05, ** p<0.01, *** p<0.001

Table A22: Information and Discrimination Capacity: Cox Proportional-Hazards Model for Time to Respond Using Alternative Independent Variable — EU Revenues PC (2010-2017) (Outliers Removed)

	Time to Respond (Days)			
	(1)	(2)	(3)	(4)
EU Revenues PC (No outl) (Log.)	0.979 (0.063)	0.954 (0.068)	1.157 (0.096)	1.129 (0.098)
Business Inquiry	0.584*** (0.052)	0.739** (0.069)	11.569** (10.719)	16.153** (15.650)
Extensive Inquiry	1.152 (0.100)	1.083 (0.095)	1.152 (0.100)	1.096 (0.097)
Business Inquiry × EU Revenues PC (No outl) (Log.)			0.658** (0.085)	0.648** (0.089)
Socio-economic Controls	No	Yes	No	Yes
Legacy Controls	No	Yes	No	Yes
Survey Controls	No	Yes	No	Yes
Observations	2426	2326	2426	2326
χ^2	38.95	72.38	47.08	86.33
Pseudo Log-Likelihood	-4019.940	-3882.500	-4019.940	-3882.500

Exponentiated coefficients (Hazard ratios); t statistics in parentheses. Constant term has been omitted.

* p<0.05, ** p<0.01, *** p<0.001