

**Formal Institutions & Trust:  
A Comparative Study of Social Trust Formation**

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**Abstract**

*This thesis presents evidence on the relationship between the people's perception of the quality of their country's formal institutions and their likelihood to express higher levels of social trust. I use regression analysis in a quasi-experimental framework in order to measure the differential effect of a variation in institutional quality on the evolution of social trust among individuals who possess different characteristics, which make them more or less likely to perceive and appreciate that variation. I use World Values Survey and the European Values Survey cross-sectional survey data that covers the period 1993 through 2012 in six waves. The variation used is the creation and subsequent success of a powerful anticorruption agency in Romania that has been tasked with the prosecution of high-profile individuals in corruption-related offenses since 2006. I find that the institutional variation has a stronger effect upon the evolution of generalized social trust among urban respondents in the post-treatment period, but not among frequent newsreaders and those who report a greater level of interest in politics. I also find that the treatment has a positive differential effect on the level of institutional trust reported by frequent newsreader and people who are interested in politics, but not urban respondents. However, given the quasi-experimental nature of the research design and the limitations of the two datasets used in this thesis, causal identification is difficult and the empirical results should therefore be interpreted with caution.*

**Keywords:** formal institutions, institutional quality, social trust

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### **List of Abbreviations**

PCR – Romanian Communist Party  
FSN – National Salvation Front  
CDR – Romanian Democratic Convention  
PNL – National Liberal Party  
PNTC – Christian Democratic National Peasant's Party  
PDSR – Party of Social Democracy in Romania  
PSDR – Romanian Social Democratic Party  
DA – Justice and Truth Alliance  
PNA – National Anticorruption Prosecution Office  
DNA – National Anticorruption Directorate

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# I. Introduction

## 1.1 Research Question

This thesis investigates the origins of social trust. This research question deserves to be examined more closely for two reasons. First, despite the growing popularity of the notion of social trust since Putnam's groundbreaking work on social capital theory in the early 1990s, its determinants have not yet been clearly identified and remain a largely understudied topic. Second, the variable of social trust appears to be positively correlated with multiple socially desirable outcomes, such as democratization, personal life satisfaction, and economic growth (Newton 2001; Mironova 2015; Algan and Cahuc 2013; Knack 2001). Therefore, gaining a better understanding of the root causes of social trust could potentially help policymakers craft more trust-friendly policies and institutions, which in turn would have a beneficial effect on society as a whole.

The rest of the thesis is structured as follows: in the first chapter, I explain the broader relevance of the research question and summarize the content of the thesis; in the second chapter, I define the dependent and independent variables, and review the main theories related to the determinants of social trust; in the third chapter, I describe the main theoretical contribution of this paper to the social trust literature; in the fourth chapter, I provide a detailed background of Romania's post-communist history leading up to the creation of the National Anticorruption Directorate (i.e. DNA); in the fifth, sixth and seventh chapters, I outline my empirical strategy, present my results, and conclude with a discussion of my findings. The final two chapters contain the appendix and references.

## 1.2 Relevance of Research Question

Although there is little academic consensus regarding how social trust is produced or maintained, the social science literature almost unanimously acknowledges social trust as a valuable societal resource. The benefits of social trust can be broken down into three broad categories, namely social, economic, and political.

First, sociologists have embraced social trust as a means for building and maintain strong and durable social relationships. Scholars argue that cultivating social trust can help rebuild struggling communities or accelerate the development of communities that are already strong (Wilson 1997; Hearn 1997). More specifically, at the individual level, trust has been shown to promote volunteering, participation in communal activities (Uslaner 2002), and recycling (Sønderskov 2011).

Second, economists have also acknowledged the relevance of social trust in promoting economic growth. For example, Mill identifies the “rarity of persons who are supposed fit to be trusted with the receipt [...] of large sums of money” as one of the main impediments to conducting business (1848, 133). Similarly, Hardin describes trust as a symbolic commodity that is necessary for the success of market economy (2001). Other scholars argue that social trust functions as a lubricant that facilitates economic exchanges and thus contributes to the creation of a business-friendly climate of interpersonal cooperation (North, 1990; Misztal 1996; Arrow 2000; Krishna 2000). Putnam argues that regional differences in social trust (and more broadly speaking, social capital) across the Italian territory could partly explain why the North has managed to outperform the South in terms of both economic growth and institutional performance (1995). At the aggregate level, several studies have found that high levels of social trust are generally associated with high economic growth and human development rates (Algan and Cahuc 2013; Knack and Keefer 1997).

Third, political scientists have extensively discussed the political and institutional implications of social trust accumulation. In fact, several 19<sup>th</sup> century political theorists have emphasized the importance of social trust for the development of the modern state. For instance, in his study of American democracy, Tocqueville acknowledges the role of social cohesion and mutual trust in encouraging political participation and building a successful democratic system. Uslaner remarks that individuals living in communities that exhibit high levels of social trust are more likely to cooperate for the common good of society (2002). Similarly, Putnam claims that social trust allows individuals to act together more effectively and pursue shared objectives (1993). In more practical terms, social trust has also been shown to promote tax payment (Scholz and Lubell 1998) as well as more effective democratic government (Knack 2002).

It is therefore clear that social trust promotes desirable collective outcomes. From the point of view of policymakers and institutional actors, the follow-up question to the evidence of the positive effects of social trust should be how could this valuable resource be built up?

### **1.3 Roadmap**

In first part of this paper, I argue that people infer the trustworthiness of their fellow citizens by evaluating the quality of the formal institutions that govern their community. This mechanism builds upon the notion of representativeness, which refers to a heuristic decision-making rule that people use to determine the probability of an event under uncertainty. Representativeness suggests that people expect an event, object, or person, to be similar in essential characteristics to its parent population. In this thesis, I argue that people gauge the trustworthiness of other citizens by taking into account the characteristics of the institutions with which they are associated.

This thesis uses quasi-experimental research design in order to determine whether a positive variation in a country's *institutional quality* has an effect on the evolution of *social trust* among the country's citizens. I incorporate both the *generalized* and *institutional* dimensions of social trust in my analysis. I limit the scope of the study to Romania and use regression analysis of pooled World Values Survey and European Values Survey data collected between 1993 and 2012 to identify the differential effect of the creation and subsequent success of a powerful anticorruption agency on internal levels of social trust among different categories of respondents, who were more or less likely to perceive and appreciate this institutional improvement. More specifically, I categorize respondents by the size of the city, the frequency of political news consumption, and their reported level of political interest. This experiment is effective because it exploits an exogenous, unexpected, and meaningful improvement in the state's ability to reduce corruption that did not affect everyone equally. Although causal identification is difficult, the results of such a study can still offer valuable insights regarding the relationship between institutions and social trust.

The empirical analysis shows mixed results. First, I find that the institutional variation has a stronger effect upon the evolution of generalized social trust among urban respondents in post-treatment period, but not among frequent newsreaders and those who report a greater level of interest in politics. I also find that the treatment has a positive differential effect on the level of institutional trust reported by frequent newsreader and people who are interested in politics, but not urban respondents.

Therefore, this paper provides limited evidence that positive variations in the quality of formal institutions, such as the one embodied by the creation of the DNA, could potentially facilitate the accumulation of social trust within society. The contributions of this paper are both theoretical, since I describe an original mechanism that incorporates concepts used in the

field of psychology, as well as methodological, since I identify and exploit a unique institutional variation that affected various groups of the population differently.

## II. Definitions and Literature Review

### 2.1 Definitions

#### 2.1.1 Defining Social Trust

During the 1990s and 2000s, the concept of social trust has become increasingly popular in a wide range of social science disciplines, including sociology, economics, and political science. Despite its recent popularity, however, social trust remains a complex and ambiguous notion that does not have a single commonly accepted definition in the political science literature. In fact, a wide variety of definitions and interpretations of this concept have been put forward over the years, but no consensus has been reached as to what social trust actually means. Therefore, the first difficulty of studying social trust is trying to define it in a clear and concise manner.

The concept of social trust has often been conflated with social capital. In fact, much of the recent literature on social capital treats the two notions as synonymous (Wilson 1997; Brehm and Rahn 1997; Arrow 2000). However, the theoretical relationship between them remains unclear. According to Putnam, social trust is a marker of social capital, which represents the collective value of all the social networks that pervade society (1993). In other words, social trust is one of the many informal norms that govern the behavior of individuals in a community and allow them to form social bonds. Similar to other norms, the level of social trust determines the size and quality of social networks because it affects the way in which people interact, cooperate, exchange etc. Thus, from this perspective, social trust appears to be both a constituent and derivative of social capital.

However, while Putnam is certainly correct in characterizing social trust as one of the essential components of social capital, he fails to provide a more concrete definition of this

concept. Therefore, in this paper, I build upon Putnam's understanding of social trust and define it as the willingness of citizens to trust other members of their community. But what exactly does trusting others actually mean? In order to provide a satisfactory answer to this question, I refer to the three most commonly cited definitions of trust and attempt to incorporate them into a simple, unified framework. First, Hardin succinctly defines social trust as "encapsulated interest"; in other words, the people's incentive to be trustworthy is grounded in the belief that it is in their own interest to take other people's interests into consideration (1998, 12 – 15). Second, Warren argues that trust embodies an individual's conviction that most members of their community either have common interests or at least will not seek to harm others (1999, 311). Third, Gambetta claims that the decision to be more or less trusting towards others is determined by the subjective probability with which people assess whether other agents and entities will perform certain actions that will be beneficial, or at least not detrimental to them (1988, 217). Therefore, despite using different formulations, all of the aforementioned authors seem to imply that social trust is the belief that other people or institutions will, at worst, not do you harm, and at best, act in your interests.

This definition encompasses two different kinds of social trust, namely *generalized* and *institutional* trust, both of which are covered in this paper. *Generalized* trust only concerns the individual's propensity to trust an abstract, distant *other* (i.e. citizen or member of the community), rather than a close family member, friend, or colleague. *Institutional* trust refers to the dynamic relationship of trust between citizens and political institutions.

### 2.1.2 Defining Institutional Quality

Similar to social trust, the concept of institutional quality can also be difficult to define. Before providing a working definition, however, it might be useful to first describe what institutions are. According to Huntington, institutions are “stable, valued, recurring patterns of behavior” (1968, 9). Analogously, Helmke and Levinsky state that institutions are “rules and procedures that structure social interaction by constraining and enabling actors’ behavior” (2004, 5). In other words, institutions are structures that govern the behavior of individuals within a given community by creating and enforcing certain rules of conduct. Institutions can be further divided into two different kinds, namely *formal* and *informal*. *Formal* institutions are embodied in concrete state-enforced rules, which include written constitutions, laws, policies, regulations etc. *Informal* institutions represent the social norms, customs and conventions that shape the thought and behavior of the members of a society (Leftwich and Sen 2010; Berman 2013). Furthermore, the power held by *formal* institutions can either be *de jure*, which refers to the formal, official status of an institution, or *de facto*, which refers to situations that are true for practical reasons. This thesis deals exclusively with the quality of *formal* institutions and their *de facto* power, which in turn affects the evolution of internal levels of social trust.

But what exactly does institutional quality mean? Various different measures of the quality of a country’s governance and institutions have been used in the political science literature. Despite the multifaceted nature of this concept, however, the following six indicators of institutional quality tend to be employed the most often: accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption (Kandil 2009). In this paper, I refer to the concept of institutional quality as the state’s capacity to control corruption; therefore, I “operationalize” this variable by identifying an



institutional variation that leads to an improvement in the state's *de facto* ability to reduce its levels of corruption.

## 2.2 Literature Review

Broadly speaking, there are two main theoretical approaches regarding the question of the origins and nature of social trust. In order to better situate the theoretical argument used in this paper, it is necessary to review the conceptual frameworks of these two schools of thought. The names and main variables of the theories mentioned below are presented in Table 1.

The first major theory of social trust, also known as the *individual* approach, argues that social trust is a core inheritable personality trait of individuals (Erikson 1950; Allport 1961; Cattell 1965; Rosenberg 1956). According to this view, social trust is learned in early childhood through primary socialization and persists throughout the individual's entire life. Although trust may still decrease drastically as a result of a traumatic experience, it tends to remain stable through time and is mostly immune to the individual's experiences following his early upbringing. This theory suggests that social trust is part of a broader set of personality characteristics that include agreeableness, optimism, and self-satisfaction. Thus, for some authors, trust-related survey questions merely reveal the individual's general disposition towards the world, rather than his response to the constantly changing social environment that surrounds them. For instance, an optimist might be more naturally inclined to trust and cooperate with strangers because of a more developed sense of altruism. Pessimists, however, will tend to have more misanthropic personalities and therefore be less open to the possibilities of social cooperation and trust. While this theory certainly offers compelling insight into the nature of social trust, it has generally failed to gather any kind of

empirical support to explain the large variations in attitudinal measurements of social trust over the years.

The second major theory of social trust, also known as the *societal* approach, sees trust as a property of society, rather than a core psychological feature of individuals. According to this view, trust is the product of individual experience and is therefore subject to change, as we constantly modify or update our feelings in response to changing social, political, or economic circumstances. This view describes trust as a malleable resource that is perpetually being redefined by individuals who react to the world that surrounds them. Thus, rather than capturing individual inclinations, trust-related survey questions actually inform us of how respondents assess the trustworthiness of society. For this reason, the levels of social trust reported in surveys tell us more about the quality of social systems rather than the personality types of those living in them. This interpretation of trust is more credible than the previous one for two reasons. First, it offers a compelling explanation for the wide variations in trust-related survey results throughout history. Second, it is also more plausible due to the fact that individuals living in wealthy and democratic countries systematically report higher levels of social trust, compared to their counterparts living in less developed communities.

The societal approach is further divided into two additional branches, namely the *civil society* and *institutional* models. The *civil society* model claims that social trust is a product of voluntary association and participation in collective organizations, which facilitate repeated social interactions between individuals (Putnam 1993; Dinesen 2012; Glanville and Paxton 2007). It is interesting to note that the idea that social trust depends on participation in public interest organizations can also be found in the works of several political theorists as early as the first half of the 19<sup>th</sup> century. Indeed, thinkers such as Tocqueville or Mill argued that successful democratic societies could only be built by encouraging participation in voluntary organizations in the local community. They also believed that direct, sustained,

face-to-face involvement in community governance would strengthen social bonds and thus help people understand the value of cooperation and acknowledge the importance of pursuing the common good, rather than their own selfish interests. From this perspective, increasing internal levels of social trust would require creating public structures to facilitate direct individual interaction at the local level. However, empirical evidence in support of the trust-generating qualities of civil society is limited, especially when taking into account the problem of reverse causality (Bekkers 2012; Claibourn and Martin 2000; Stolle 2001). As such, survey research only shows a weak and intermittent association between membership of voluntary organizations and willingness to express trust. In fact, even in the most developed countries, the statistical association between social trust and associational membership is small (Torcal and Montero 1996; Dekker and van den Broek 1996; Newton 1999). This model can also be considered obsolete since that the characteristics of voluntary associations have changed greatly since the 19<sup>th</sup> and early 20<sup>th</sup> century. For example, most modern advocacy organizations extend far beyond the local sphere and the vast majority of their members never actually meet.

Due to the empirical shortcomings of the *civil society* model, scholars began to focus on the *institutional* determinants of social trust. This view attempts to identify the various ways in which formal political and legal institutions can affect social trust, both directly and indirectly. This model has inspired numerous compelling causal mechanisms, some of which deserve to be mentioned. For example, some authors argue that the creation of an inclusive democratic framework, which gives all individuals equal opportunities to express their views and participate in the decision-making process, could mitigate social distrust (Ljiphart 1999). Other have suggested that political trust is beneficial for the development of social trust because politicians and representatives of public institutions act as role models for ordinary citizens who tend to modify their behavior in accordance with their perception of political

elites (Yamagish and Yamagishi 1994; Brehm and Rahn 1997; Rothstein 2003). Lastly, another group of scholars claims that, by providing high-quality public services and proper development infrastructures, governments can create more “winners” (i.e. people with higher incomes and more stable jobs), who tend to express higher levels of trust in comparison to the “losers” (i.e. people living in a precarious economic situation). Having more “winners” relative to “losers” in society would ultimately lead to a decrease in economic inequalities and social fractionalization, which in turn would allow people to better identify with the struggles of their fellow citizens (Knack and Keefer 1997; Zak and Knack 2001; Uslaner 2002). Therefore, it seems that the *institutional* model of social trust has produced some of the most convincing theoretical arguments compared to the previous theories of social trust.

**Table 1:** Theories of Social Trust and Related Variables

<b>Theories</b>	<b>Variables</b>
<i>Individual approach</i>	
Personality theory	Optimism, agreeableness, primary socialization
<i>Societal approaches</i>	
Civil Society theory	Membership in voluntary organizations
Institutional theory	Democracy, economic equality and well-being, public safety, institutional quality

### III. Theory

This chapter develops the main theoretical argument that explains how formal institutions can affect a community's internal levels of social trust. In this thesis, I focus on one of the various possible determinants of social trust, namely the quality of contemporary political and legal institutions (i.e. formal institutions). The theoretical mechanism that I describe in this section aligns with the *institutional* approach to the formation of social trust. I use insights from the field of psychology in order to better understand individual decision-making processes. Thus, I argue that people use the quality of their country's formal institutions to infer the trustworthiness of other members of their community. For instance, fair, efficient, and transparent state institutions (i.e. judiciary, parliament, executive government etc.) provide important cues, or signals, about the norms – and therefore the trustworthiness – of the people who are governed by them.

This theoretical argument is based on the concept of heuristics. In psychology, heuristics are simple strategies, or rules-of-thumb, that people use to form judgments and make decisions when confronted with complex problems. Simon argues that heuristics are useful because human judgments suffer from bounded rationality, meaning that they are always limited by available information, time constraints, and cognitive deficiencies (1982). Similarly, Tversky and Kahneman also demonstrate that people tend to follow heuristic decision-making strategies when their ability to acquire information is limited (1974). For this reason, heuristic shortcuts tend to be efficient but not optimal, because they rely on data of limited validity and therefore lead to systematic estimation errors, known as cognitive biases. Generally, heuristics govern automatic and intuitive judgments, rather than complex and elaborate thought processes; however, it is interesting to note that heuristic strategies determine how people interact with both the physical and social worlds. For example, people are often inclined to estimate the distance of certain objects based solely on their clarity,

expecting to see the more distant objects less sharply than nearer ones. I argue that, when it comes to social interactions, similar mental shortcuts are also common, as people constantly make subjective probabilistic assessments concerning the likelihood of uncertain events, including the trustworthiness of their fellow citizens.

In this thesis, I focus on one particular kind of heuristic, namely representativeness. The representativeness heuristic implies that people expect instances (i.e. objects, persons, or events) to possess the salient characteristics of the category of which they are members (e.g. expecting someone who is a librarian to resemble a prototypical librarian). I suspect that representativeness is particularly important when evaluating the trustworthiness of others. Indeed, determining the trustworthiness of other people is a complex and lengthy process that would normally require a large amount of time and information to be properly completed. However, due to some of the aforementioned cognitive and practical limitations, people are more likely to automatically determine the probability of someone being trustworthy by examining the attributes of the categories with which they are associated. Thus, if a state's formal institutions are corrupt and unfair, one might intuitively expect the state's citizens to display similar features and ultimately choose to be less trusting towards them. Representativeness, which is based on a form of associative thinking, also entails that if the salient prototypical features of the category (in this case, the state) change, so should the people's attitude towards the instances that are being categorized (in this case, the citizens). The goal of this paper is to identify an external shock that leads to a visible improvement in the quality of a state's institutions, which in turn prompts the citizens to readjust their views regarding the trustworthiness of others by altering that state's defining characteristics.

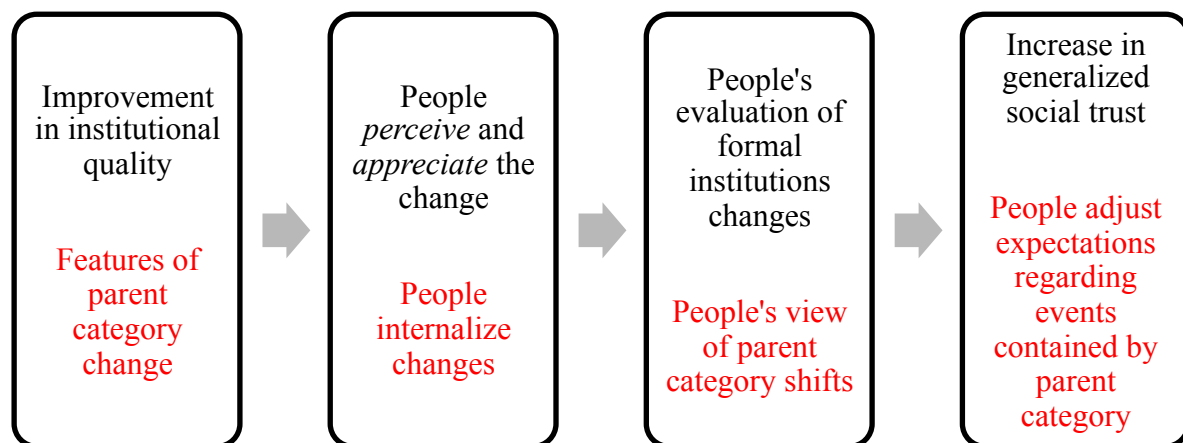
Therefore, I expect people to adjust their attitude regarding the trustworthiness of other people as soon as their perception of the quality of the formal institutions that govern them changes. Due to the nature of the representativeness heuristic, this shift should be

proportional and immediate. To summarize, the causal chain should work as follows: a visible and meaningful variation in institutional quality at the macro-level will lead to an increase in institutional trust, as people change their perception of the state's institutions, which in turn should increase their propensity to trust other people. This theoretical mechanism is schematically illustrated in Figure 1. Given the particularities of this causal mechanism, the people most affected by the variations in institutional quality should be those who have the best ability to perceive and appreciate these changes. Thus, the goal of this thesis is to measure the differential effect of a major institutional improvement upon groups of individuals who possess different characteristics that make them more or less likely to react (i.e. modify their attitude towards the world) to such a variation. It is also important to bear in mind that if people constantly reassess the trustworthiness of others as institutions develop, the institutional improvements that they react to must be palpable and concrete rather than superficial. In the case of the treatment used in this paper, this means that it is not the (*de jure*) establishment of the Romanian anticorruption agency that triggers an increase in social trust among the population, but rather its (*de facto*) success in combating corruption by indicting high-profile bureaucrats and politicians.

As mentioned previously, the likelihood to react to variations in institutional quality depends on two conditions. First, individuals must be able to *perceive* the institutional improvements as they happen. Perceiving an institutional improvement means cognizing its occurrence; in other words, perception refers to the individual's ability to become aware of what is happening in the world. However, one's mere knowledge of what is happening in society is not enough to actually affect one's behavior. Thus, individuals must also be able to *appreciate* the institutional improvements as they happen. Appreciating an institutional improvement means acknowledging its magnitude and importance; in other words, appreciation refers to the individual's ability to understand why certain events matter – this

ability depends on the individual's level of political knowledge, interest in politics, and proximity to the changes that are taking place (i.e. since that will determine the extent to which particular events affect the individual's well-being). In this paper, I seek to capture both of these dimensions and therefore compare changes in social trust among respondents who were able to not only perceive, but also appreciate a major institutional variation. In order to incorporate the aforementioned dimensions, I categorize respondents along three broad lines, namely by their proximity to the treatment, political knowledge, and political interest. Given the limited amount of data provided by the surveys used in this thesis, the most convincing measures of these variables are the following: (1) I use the size of the respondent's city as an indicator of *proximity*, since the treatment affected only large cities, (2) I use the frequency of political news consumption to estimate the effect of *political knowledge*; (3) lastly, I incorporate the respondent's reported level of *interest in politics*. This gives rise to the following hypotheses.

**Figure 1:** Theoretical Mechanism Describing Relationship Between Variations in Institutional Quality and Generalized Social Trust





*H<sub>1</sub>: A variation in a country's institutional quality will have a stronger effect on the evolution of social trust among people who live in urban areas.*

First, I predict that urban respondents are more likely to express higher levels of social trust in the post-treatment period. This hypothesis is based on the assumption that citizens who find themselves in greater proximity to certain events are more likely to perceive and appreciate their importance. In this case, proximity makes the material damages caused by corruption and the indictments of those responsible for them easier to detect. The expectation that urban respondents will report a relatively higher level of social trust in the post-treatment period is motivated by a particularity in the administration of the treatment, which affected only large cities and did not concern towns or villages (i.e. the anticorruption agency investigated only high rather than petty corruption cases and did not hold jurisdiction over small localities).

*H<sub>2</sub>: A variation in a country's institutional quality will have a stronger effect on the evolution of social trust among people who are frequent consumers of political news.*

Second, I expect frequent consumers of political news to also report higher levels of trust in the post-treatment period. Respondents who consume political news more frequently are more likely to have better knowledge and understanding of politically relevant affairs, such as the indictments of high-profile figures by the DNA. Furthermore, given the notoriety of the individuals targeted by the DNA's investigations, their indictments have systematically garnered substantial media coverage as soon as they were made public.

*H<sub>3</sub>: A variation in a country's institutional quality will have a stronger effect on the evolution of social trust among people who report a higher level of interest in politics.*

Third, I suspect that individuals who report a higher level of interest in politics will also experience an increase in social trust following the introduction of the treatment. The mechanism connecting these two variables is quite straightforward: having a greater interest in politics suggests that the individual is equipped with the necessary conceptual tools to appreciate the importance of the indictments of corrupt high-profile politicians for the state of the country's democracy.

## **IV. Historical Background and Evaluation of Treatment**

### **4.1 Preliminary Observations**

In the previous section, I have provided an in-depth account of my theoretical framework; I now turn towards the more practical dimensions of my study and discuss the treatment used in this thesis. Traditional experimental approaches to the study of social trust are difficult to carry out for both logistical and ethical reasons. Indeed, controlling for cultural variables, such as social trust, and assigning treatments at the institutional level are two practically impossible endeavors. Using historical institutional variations in quasi-experimental frameworks is therefore a compelling, albeit imperfect, alternative to large-scale experimental designs. However, identifying such historical institutional transformations can also be a daunting task, since formal institutions tend to be deeply entrenched in society, which means that radical institutional overhauls are a fairly rare occurrence. In that sense, Eastern Europe represents an ideal place for social scientists in search of appropriate treatments due to the massive changes underwent by the countries of this region following the fall of the Soviet Union and the subsequent democratization processes that took place throughout the 1990s. In this section, I contextualize the unexpected yet meaningful institutional variation (i.e. the treatment) whose effect is the focus of this thesis.

### **4.2 Romania's Difficult Democratic Transition (1989 – 1996)**

During the Second World War, Romania tried to remain neutral; however, pressures from Moscow and Berlin prompted the Romanian government to join the Axis forces in 1940. After the end of the war and the defeat of the Axis, the USSR forced Romania's monarch, King Michael I, to abdicate and leave the country. Thus, in 1947, Romania was proclaimed a communist People's Republic and remained under the direct military and economic control of

the USSR until the 1950. In April 1948, Gheorghe Gheorghiu-Dej, who was named the First Secretary of the Romanian Worker's Party and remained the leader of Romania until 1965, managed to persuade the Soviet First Secretary Nikita Khrushchev to withdraw troops from Romania. Following Gheorghiu-Dej's death in 1965, his successor, Nicolae Ceaușescu, who was appointed as the new General Secretary of the Communist Party (i.e. PCR), began to progressively push for more authoritarian measures and pursue several unpopular policies that lasted until his regime's demise in 1989. In December 1989, a series of violent civil protests precipitated the fall of Romania's Communist regime, culminating in the show trial and execution of Nicolae Ceaușescu and his wife Elena. Despite the temporary euphoria of the Revolution, the chaos caused by the abrupt collapse of the regime had a profound and lasting effect on Romania's political landscape and society. In the aftermath of the Revolution, a new political structure, the National Salvation Front (i.e. FSN), came to power. The FSN, which was formed at the initiative of some of Ceaușescu's plotting generals, welcomed several former members of the Communist Party, a group which included the party's leader, Ion Iliescu. By using the media to launch attacks against their political opponents, the FSN managed to rapidly seize control of the main institutions of the state. Once the confusion of the Revolution had dissipated, the FSN organized the first free elections in the country's modern history, winning the presidential elections on 20 May 1990, while also obtaining a majority in both the Assembly of Deputies and the Senate. Despite the fact that over 200 political parties were formed in the years following the Revolution, the FSN was by far the most well established platform, benefitting from both massive popular support and the admiration of foreign leaders.

The first stage of Romania's democratic transition was, however, more problematic than in most post-communist countries. Indeed, Romania's early democratic experience was a blend of authoritarianism and paternalism, held together by various processes that sought to

maintain the bureaucracy in positions of economic and institutional power, while also diminishing the political influence of the opposition (Gussi 2007). Furthermore, the development of a powerful alliance between the members of the state bureaucracy, who were either associated with the recently-formed FSN or former members of the PCR, and the new business elite, who managed to secure key public contracts in the aftermath of the Revolution, resulted in the establishment of a new informal *nomenklatura* (Deletant 1998). Even after the dissolution of the FSN and the development of democratic pluralism, the concentration of economic and political power in the hands of a small nucleus of elites remained a defining feature of Romania's political landscape. This unique transitional phase – and the outcomes associated to it – was largely dominated by the figure of the FSN's first leader, Ion Iliescu. Iliescu, who had gained a respectable amount of political legitimacy in the post-communist period, both due to his electoral victories and to the extensive territorial presence of his party, spearheaded most of Romania's early reforms (Tismăneanu 1998). Furthermore, until 1996, Iliescu was able to cater to the fears of Romania's industrial workers and peasants who lived in less developed regions, meaning that his popular appeal allowed him to preserve a structure of power that was highly reminiscent of Ceaușescu's authoritarian formula. Thus, the state of affairs that characterized Romania in the first half of the 1990 decade led some political thinkers to qualify it as Neo-Bolshevism, or Neo-Communism: a strong charismatic leader, surrounded by a dense bureaucratic network with ties to the growing private sector. Tismăneanu aptly summarizes the main characteristics of Romania's early transition phase:

*“Ion Iliescu's regime symbolized Romanian communism's afterlife: a syncretic combination of simulated pluralism and residual Leninism, lip service to democratic values and nostalgia for bureaucratic authoritarianism [...] add to this the tentacular growth of economic mafias protected by*

*government institutions. Instead of a market democracy, post-Ceașescu Romania was a kleptocratic regime with a pluralist façade*”. (1997, 22)

### **4.3 Economic Reforms, Persistence of Corruption, and Early Attempts to Combat Corruption (1996 – 2002)**

In 1996, the results in local elections signaled a major shift in the political orientation of the Romanian electorate, as opposition parties swept most of the country’s major cities, including the capital, Bucharest. The trend continued in the same year’s legislative and presidential elections, in which Iliescu’s PDSR (i.e. a party formed in 1992 after the FSN split due to internal disputes and political tensions) lost a large share of the rural electorate that had once supported his rise to power. The opposition was structured around an electoral alliance, the Romanian Democratic Convention (i.e. CDR), which included several center-right political parties, namely the Christian Democratic National Peasant’s Party (i.e. PNTCD) as well as the National Liberal Party (i.e. PNL). The opposition campaign emphasized two central points: implementing economic reforms and reducing corruption. Indeed, Iliescu’s gradualist approach to economic reform yielded poor results, which caused great frustration and anxiety among a large share of his electorate. Furthermore, the rampant corruption within the entire state apparatus was becoming more visible, which upset people who sought to move away from the legacy of the communist regime. Thus, while Romanian voters did not have a credible alternative to Iliescu during the first post-communist years, the newly formed CDR offered them a new and long awaited democratic option.

Although Romania had three different prime ministers in the years that followed CDR’s historical electoral victory, the governing parties preserved their coalition. However, due to mounting internal tensions and economic hardship brought by structural reforms, popular dissatisfaction with the CDR’s governance surged, which allowed the Social Democratic Party (i.e. PSD, a new party resulting from the fusion of the PDSR with a smaller

socialist platform known as the PSDR) to come back to power in 2000. Thanks to the leadership of Prime Minister Adrian Năstase and the reforms undertaken by the CDR, Romania entered a period of relative prosperity, consistently experiencing high rates of economic growth and political stability. Furthermore, the Năstase government continued to pursue pro-Western foreign policy, which eventually led to Romania's joining NATO and signing the accession treaty to join the EU in the spring of 2004. Romania's economic success and progressive diplomatic expansion also facilitated the rise of an active civil society that began demanding more transparency and accountability from state institutions and their representatives. Progressively, the public's focus shifted from economic reform to judicial reform: as the market economy finally started bearing fruit, the state's democratic institutions needed to be tinkered with next.

Romania's early problem with high-level corruption is difficult to overstate. Throughout the 1990s, Romania's political landscape was shaken by a series of high profile corruption scandals that had massive repercussions upon the country's development. In order to better grasp the magnitude and consequences of Romania's high-level corruption, it might be useful to provide some concrete examples of cases that the country had to confront before reforming its legal system. One of the most infamous scandals that took place in Romania during the 1990s involved Bancorex, which used to be the country's largest public bank and one of the main pillars of its developing economy. Due to its non-performing loan portfolio and despite the state's attempt to recapitalize it, the bank was forced to declare bankruptcy. The bank's poor performance was directly related to behind-the-scenes political dealings and corruption, which ultimately cost the state over \$2 billion – a sum that represented approximately 7% of Romania's GDP at that time. Today, the Bancorex fiasco is remembered as one of the most powerful symbols of the oligarchic state that Romania was turning into after the Revolution (Gallagher 2005). Another corruption scandal that had a lasting effect on

Romanian society involved a contract issued by the Ministry of Defense to buy communications equipment from the American telecommunications company Motorola for \$6 million, a price that was ten times more expensive than the actual value of equipment (Dana 2006). Romania's post-communist transition was plagued by many other similar corruption cases that involved officials at the highest level of the state. Despite receiving tremendous media attention, most of these cases did not result in any indictments due to the absence of proper judicial structures.

Romania's early anti-corruption efforts were feeble and disappointingly ineffective. Despite the government's attempts to bring Romania closer to the international community, little was done to combat internal corruption. In fact, Năstase himself was later convicted for taking bribes, blackmailing political adversaries, and misusing public funds to support his campaign. The only meaningful anticorruption measure that was carried out during the Năstase years was the creation of the National Anticorruption Prosecution Office (i.e. PNA), a specialized agency tasked with investigating and prosecuting politicians – and other persons who exercise a significant degree of influence in society – for corruption-related offenses that caused material damage to the Romanian state (e.g. bribery, graft, patronage, and embezzlement). More specifically, the PNA was established in 2002 by the Emergency Ordinance No. 43/2002 of the Romanian Government with the purpose of combating all kinds corruption offences that caused important prejudice to the Romania state's institutions or to its economic interests (PNA Activity Report 2003). The establishment of the PNA represents an important part of Romania's modern history because it was the first institutional structure that was exclusively tasked with tackling corruption. However, the PNA was not given the necessary tools to properly accomplish its highly ambitious mission: not only were its objectives vaguely defined, but the boundaries of its power were also unclear, which in turn often pushed the PNA in the territory of questionable constitutionality (DNA Report



2005). For these reasons, in the first years of its existence, the PNA was relatively ineffective in combatting corruption: only 10% of the cases investigated by the agency resulted in criminal proceedings – an improvement by Romanian standards, but an insufficiently large one in the eyes of Romania's foreign partners (European Commission Report to the European Parliament and Council 2007). Therefore, the creation of the PNA was initially perceived as a positive yet superficial response to Romania's growing corruption problem on behalf of the government.

#### **4.4 Judicial Reforms and the Birth of the National Anticorruption Directorate (2005 – present)**

Romania's most meaningful judicial improvement came after the end of Năstase's mandate, when the PNA was completely revamped and reinvigorated between the end of 2005 and the beginning of 2006. Before providing a more detailed look at the transformation underwent by the PNA, however, it might be helpful to first identify the main driving forces that led to the implementation of this reform. Broadly speaking, the events that took place in Romania's in the post-Năstase era were influenced by three main factors, namely foreign pressure, the general public's enthusiasm for anticorruption measures, and the synergy of a handful of politicians who actively pursued reform.

First, after signing the EU accession treaty in 2004 and being scheduled to join the Union as part of the 2007 enlargement wave, Romania began facing tremendous pressure from European Institutions and Member States to bring its institutions to EU standards in terms of transparency, integrity, and internal monitoring (European Commission Report to the European Parliament and Council 2007). In fact, the fight against corruption represented one of the most important fields monitored by the European Commission; for this reason, starting with 2005, Romania was targeted by a special safeguard clause that allowed the EU to

postpone the country's accession for another year, if deficiencies regarding Romania's anticorruption performance had been identified.

Second, the reform of the PNA was also made possible by the general public's support for anticorruption measures following the previous government's feeble response to the country's corruption problem. Indeed, in 2004, after four years of PSD-led government, the mounting public support for anticorruption measures allowed the political tide shifted in favor of a new center-right electoral alliance, the Truth and Justice Alliance (i.e. DA), which was composed of the recently formed Democratic Party (i.e. PD) and the National Liberal Party (i.e. PNL). As implied by its symbolically meaningful name, the DA was a platform whose two main political priorities were the fight against corruption and the establishment of a non-political judiciary system. According to Theodor Stolojan, the president of one of the two parties forming the alliance, the DA was created as a vehicle for coordinating opposition efforts against the PSD's alleged corruption, he stated in an interview: "we want the alliance to set us free from corruption and lies" (Lungescu 2006). The popularity of the DA message allowed the platform to achieve two major electoral victories in 2004: not only did it manage to propel Traian Băsescu, a charismatic former merchant marine deck officer and mayor of Bucharest, to the presidency, but it also secured a strong presence in the Parliament.

Lastly, Romania also benefitted from the extraordinary efforts of a class of political leaders who made the fight against corruption their top priority, despite the protests of the PSD-led opposition. As such, Băsescu and his allies dedicated their efforts to combating high-level corruption by pursuing structural reforms. Băsescu's desire to reduce corruption in view of Romania's adherence to the EU was carried out by one pivotal figure of his cabinet, namely his first Minister of Justice, Monica Macovei, who held the office between 2004 and 2007. Thanks to Băsescu's robust support, Macovei managed to almost single-handedly transform the relatively feeble PNA into the highly performing anticorruption watchdog that it is today.

However, the implementation of Macovei's reform project did not go smoothly and was heavily criticized by the opposition. Thus, the Emergency Ordinance No. 134/2005, through which the PNA was going to be reorganized into the DNA and allowed to focus its activity exclusively on high level corruption cases, was initially rejected by the Senate of Romania on February 9<sup>th</sup> 2006. The Ordinance reentered the Parliamentary debate only after the President decided to get involved and demanded the Parliament to reexamine it. After a few modifications, the Ordinance was finally approved by the Parliament in March later that year. Table 2 summarizes the most important elements of Romania's post-communist history, leading up to the creation of the DNA and the judicial reforms of the early 2006.

Overall, the treatment around which this thesis revolves appears to be the product of a set of individual decisions taken in the right circumstances. Thus, the introduction and efficiency of the DNA both seem to be independent from the outcome trend itself. In fact, in the eyes of several political commentators, the DNA is described like a fortunate accident rather than the inevitable conclusion of Romania's development during the post-communist period. This is made particularly clear when the case of Romania's fight against corruption is contrasted with Bulgaria's failure to achieve similar results. After the collapse of the Eastern Bloc, Romania and Bulgaria shared highly similar development trajectories in terms of economic growth, democratization, and corruption. Furthermore, Bulgaria also benefitted from the same window of opportunity as Romania, since it also joined the EU in 2007 and was tasked with reforming its legal system in order to clean up corruption. Despite going through a comparable democratization process and being subject to the same foreign pressure, Bulgaria has not developed any anticorruption institution with the same effectiveness as the DNA. Bulgaria's public support for anticorruption measures has amounted to nothing more than the creation of numerous superficial agencies that held no real power. The fact that the Bulgarian Parliament has repeatedly opposed the introduction of a specialized unit tasked

with tackling high-level corruption proves that the country's failure to reduce corruption is mostly due to the absence of a political will to implement reform, rather than the lack of means. To quote the words of Bulgaria's ex-Minister of Justice, Hristo Ivanov: "unless you have decisive action to investigate and punish corruption, particularly at the highest level, we are not going to see any dramatic change in institutional culture like we are seeing in Romania" (Macdowall 2016). Ivanov's concerns are also reflected in the numbers: according to Transparency International, an international anticorruption think tank, Romania was ranked 85<sup>th</sup> in the world in terms of corruption, while Bulgaria was 55<sup>th</sup> in 2005; however, in 2017, Romania was ranked 59<sup>th</sup> and Bulgaria 71<sup>st</sup>.

**Table 2:** Overview of the most important historical developments of Romania's democratization phase

<b>Time Period</b>	1989 – 1996	1996 – 2002	2002 – 2006
<b>Historical background</b>	<p>Revolution and collapse of communist regime</p> <p>Political, social, and economic turmoil</p>	<p>Economic stagnation</p> <p>Rampant corruption due to ties between bureaucratic and business elites</p> <p>Popular disappointment with governance</p>	<p>First signs of good economic performance</p> <p>Greater political stability</p> <p>Increasing foreign pressure on Romania</p> <p>Popular enthusiasm for anticorruption measures</p>
<b>Dominant political platform</b>	FSN (socialist, left-leaning, composed of former PCR members)	CDR (electoral alliance, right-leaning)	<p>PSD (social-democratic party)</p> <p>DA (electoral alliance, center-right)</p>

<b>Major policy or institutional development</b>	First free elections, but inexistent political competitions  Gradualist approach to economic reform	Successful structural economic reforms  Proposed anti-corruption reform but not carried out	Judicial reforms  Creation of the PNA  Reform and birth of DNA  Intense judicial activity
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#### 4.5 Characteristics and Results of the National Anticorruption Directorate

So far, I have described the context in which the reform of the PNA occurred. I dedicate this subsection to providing additional details regarding the jurisdiction, structure, power, and activity of the newly formed DNA. As mentioned earlier, the years 2005 and 2006 were crucial for Romania's justice system: following the Parliament's approval of the Emergency Ordinance No. 134/2005 of the Romanian Government in 2006, the former National Anticorruption Prosecution Office was reorganized to create the National Anticorruption Directorate, a new specialized autonomous structure, possessing its own legal personality, having an independent budget, and being attached to the High Court of Cassation and Justice. All the information provided below (i.e. including numbers and legal documents) is taken from the DNA's publicly available annual activity reports.

*Jurisdiction.* The Emergency Ordinance modified the dispositions regarding the DNA's jurisdiction so that this new structure could deal only with high rather than petty corruption cases. Therefore, the DNA can investigate any corruption case if the one who commits the crime falls into one of the following categories: public officials (e.g. members of parliament, ministers, senators etc.), legal practitioners (e.g. judges of the High Court of Cassation and Justice and the Constitutional Court etc.), financial controllers (e.g. commissioners of the Financial Guard, customs staff etc.), military and police officers (e.g. generals, admirals etc.), and the heads of other central public authorities. The Emergency

Ordinance also raised the financial threshold of the prejudice caused as a result of the corruption offences investigated by the DNA from €100,000 to €200,000, and the one regarding the object of traditional bribe offences was increased from €5,000 to €10,000. Second, the DNA's jurisdiction was extended to cover all the offences against the financial interests of the European Union (regardless of the value of the damage), as well as the offences of macroeconomic significance that caused material damage higher than €1,000,000. Interestingly, however, the DNA's jurisdiction was also restricted as a result of reconsidering the nature and importance of the offender's function; as such, the leaders of public authorities and institutions from towns and villages, as well as all the persons with control attributions within them, such as police agents, public notaries, and judicial executors, were excluded from the DNA's jurisdiction. This means that the DNA was given the responsibility to deal exclusively with the most important and visible cases of high-level corruption, which took place in large cities, where all of the state's central institutions are located.

*Structure.* The organizational model of the DNA was inspired by similar structures existing in countries such as Norway and Belgium. The DNA is composed of a central structure that governs multiple smaller units (i.e. 15 territorial services and 3 territorial offices) that are implanted across the Romanian territory. The DNA's command structure gravitates around a Chief-Prosecutor and two deputies, all of which are nominated by the Minister of Justice and appointed by the President, hence the importance of Băsescu and Macovei's political partnership. The DNA can be notified from multiple sources, including citizens (i.e. complaints, denunciations, self-denunciations), companies, or public authorities; however, the DNA can also take notice from its own prosecutor's work or from information published in the media.

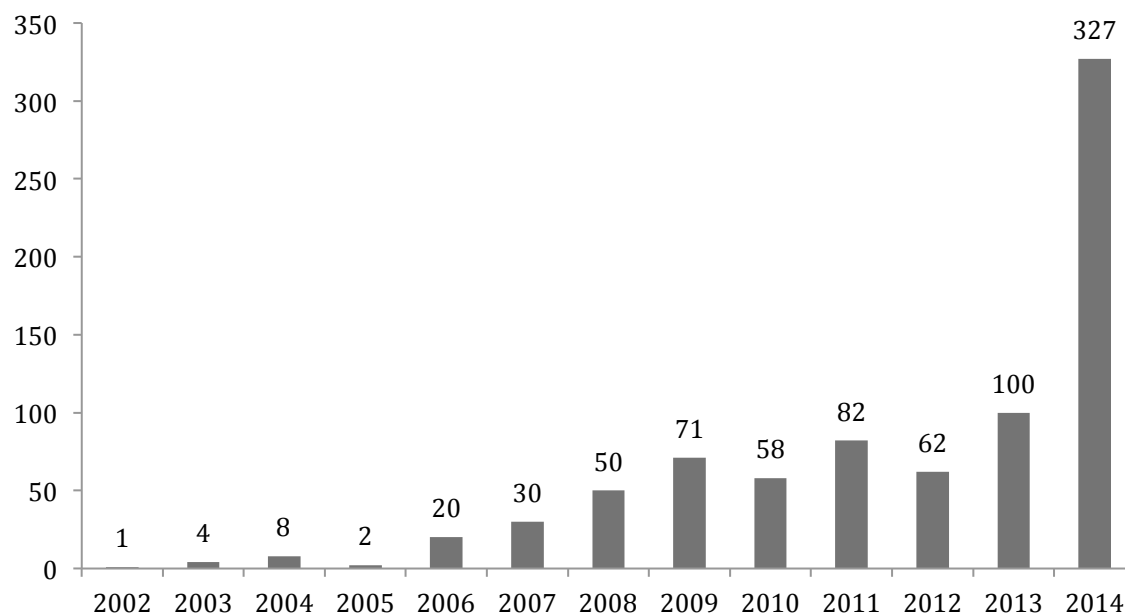
*Power.* It is worth noting that the DNA's capacity for action was also enhanced through the Government Decision No. 655/2006, which significantly increased the agency's

number of available prosecutors, specialists, and auxiliary personnel. The DNA also benefitted from the development and rapid implementation of a centralized IT network that connected the DNA's headquarters to all the territorial offices, thus facilitating communications between the agency's branches and departments. Additionally, thanks to various legislative measures as well as a rigorously applied working methodology, the DNA managed to ensure that the activity of its prosecutors would be carried out independently from the influences of their hierarchical superiors or other external actors. Lastly, the professionalism and competence of the DNA's first prosecutors also played an important part in explaining the agency's early success. For instance, the DNA's first Chief Prosecutor, Daniel Morar, was a pivotal figure in Romania's fight against corruption since he began re-opening files that had previously been closed by the former PNA management. Among the files re-opened by Morar was the famous Năstase case, which resulted in the ex-Prime Minister being sentenced to prison in 2012.

*Results.* The first concrete results of the DNA's fight against corruption came almost immediately after the agency was reformed in early 2006. The activity of the DNA's prosecutors resulted in the initiation of multiple investigations in major cases of political corruption, including cases related to large frauds in public procurements, privatizations and leasing of goods from the public domain, or corruption of the judicial system. Furthermore, during 2006, DNA prosecutors also investigated and sent to trial an unprecedented number of present and former members of Parliament, Ministers and State Secretaries, high officials of local public administrations, leaders of major governmental structures, magistrates, and other figures from across the political spectrum. Thus, during 2006, out of the 2615 cases that the DNA had to solve, 1092 were solved; the defendants were sent to trial in 127 cases, resulting in 127 indictments, for a total prejudice of 170 million RON. Similarly, in 2007, out of the 3,319 cases that the DNA had to solve, 2,070 were solved; the defendants were sent to trial in

167 cases, resulting in 167 indictments for a total prejudice of 386 million RON. In both years, over half of the defendants sent to trial had important positions of power and influence. Over the course of the following years, these numbers have continued to increase: for example, the DNA indicted 1,250 public officials for high-level corruption crimes in 2015 alone, while also sending to trial 1 Prime Minister, 5 Ministers, 16 Deputies, and 5 Senators. In 2016, the DNA set a new record by achieving a 90% conviction rate for the officials who were under investigation, a percentage that surpasses most other European states. As opposed to the PNA, the DNA also began investigating a greater number of politically connected figures, as illustrated by Figure 2. This figure clearly showcases the DNA's aggressive focus on fighting corruption at the highest level.

**Figure 2:** Evolution of Annual Number of Politically Connected Individuals Indicted by the DNA



Furthermore, the DNA has also been exemplary in terms of reporting, as it continuously showed high degrees of openness and transparency. The effectiveness of the DNA in combating corruption has been noticed both domestically (e.g. according to a survey conducted by INSCOP Research, the trust of Romanians in the DNA is high – 59.8% – in



comparison with other institutions such as the Parliament – 12.6% - or the Government – 22.6%) as well as internationally. In the 2014 Anti-corruption Report, the European Commission stated:

*“DNA has built a notable track record of non-partisan investigations and prosecutions into allegations of corruption at the highest levels of politics [...] in the past seven years, the DNA has indicted over 4,700 defendants [...] nearly 1,500 defendants were convicted through final court decisions, almost half of them holding very high level positions”. (2014, 14)*

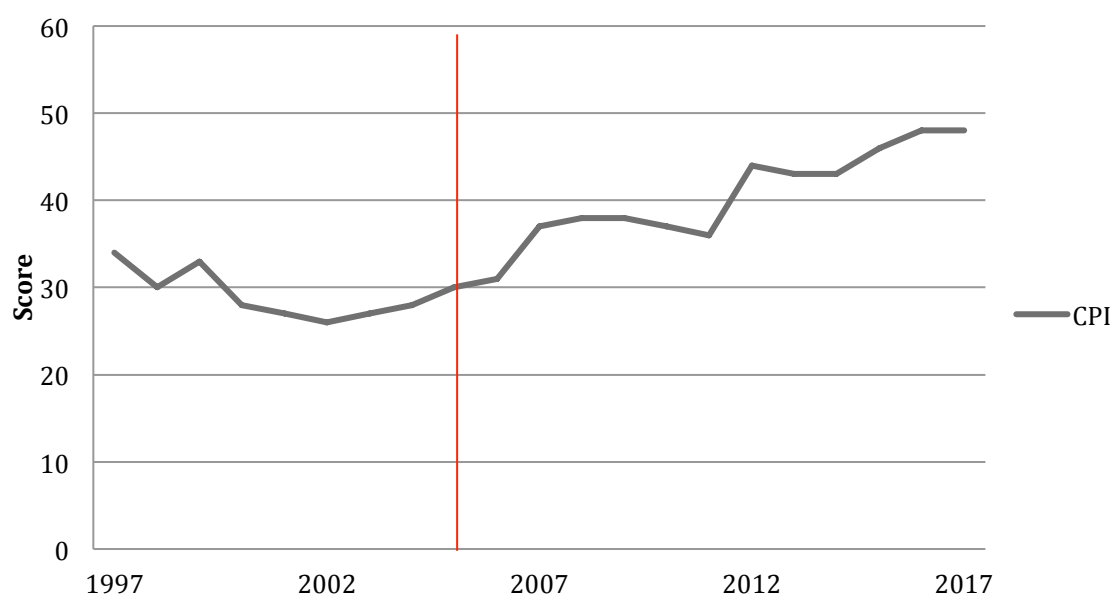
Furthermore, in 2016, European Commission President Jean-Claude Juncker proposed to remove the corruption-monitoring scheme that the Commission imposed on Romania when it joined the EU in 2007. The so-called Cooperation and Verification Mechanism (i.e. CVM) was established to monitor the progress of Romania’s anticorruption reforms. Romania received three consecutive positive CVM reports, prompting the Juncker to request the end of the Mechanism before 2019 (Păun 2016).

## **4.6 Evaluating the Treatment**

The creation of the DNA represents a compelling treatment for three main reasons. First, the DNA’s success is a good example of an improvement in the Romanian state’s institutional quality (i.e. ability to reduce corruption). Figure 3 illustrates the evolution of Romania’s Corruption Perceptions Index (i.e. CPI) from 1997 to 2016. The CPI, which is published on a yearly basis by Transparency International, measures the perceived levels of corruption by country and year, as determined by expert assessments and opinion surveys. The CPI ranks countries on a scale from 100 (i.e. very clean) to 0 (i.e. highly corrupt). Figure 3 shows that Romania’s perceived level of corruption continued to rise until 2002-3 (i.e. the CPI falls from

approximately 34 points in 1997 to 26 in 2002), started decreasing slowly shortly after the introduction of the PNA in 2002 (i.e. the CPI rises from 26 points in 2002 to 30 points in 2005), and then fell drastically after the creation of the DNA (i.e. the CPI rises from 30 points in 2005 to 48 in 2016). This curve's overall trend seems to support the idea that the reforms that took place in 2005 played a decisive role in reducing Romania's internal levels of corruption.

**Figure 3:** Evolution of Romania's Corruption Perceptions Index from 1997 to 2017



Source: *Transparency International*

Second, given the highly public nature of its activity, the existence and success of the DNA could technically be *perceived* by anyone. Indeed, the DNA specializes exclusively in the investigation of high-level corruption offences, meaning that it targets visible public figures such as ministers, senators, or mayors. Additionally, the DNA's indictments also tend to receive massive media coverage, especially since the agency began issuing its own press releases since 2006. In fact, defendants have even accused the DNA of purposefully leaking evidence to the media in order to humiliate them and create a climate of fear. Third, the outstanding performance of the DNA resulted mostly from the extraordinary personal

involvement and level of competence of its chief prosecutors and reformers, who were responding to the pressures coming from EU institutions and Member States.

The main shortcoming of the treatment is the following one: theoretically, it is still plausible to assume that the activity of the DNA actually had a negative effect on the evolution of social trust in Romania. One could argue that by revealing to the general public the widespread corruption that affected the state's institutions, the indictment of high-profile political figures would ultimately prompt people (who were previously underestimating the extent of corruption in Romania) to become less trusting. In the case of Romania, however, this is outcome is rather unlikely since the DNA's indictments did not unearth a reality that would have otherwise remained hidden. In fact, Romanians were well aware of the increasing levels of corruption that affected their country's institutions before the establishment of the anticorruption agency. Thus, rather than being an unpleasant revelation, the DNA's success was most likely perceived as a long-awaited step in the right direction for the country. As shown in Figure 3, the CPI, which is partly based on opinion surveys, clearly indicates that Romanians were worried about their country's growing corruption problem as early as 1997. In fact, scandals of political corruption were rather frequent in the press, but most of them had no judicial follow-up, due to the absence of proper institutional structures charged with fighting corruption. Furthermore, according to the results of the Public Opinion Barometer published by the Institute for Public Policy, a Romanian think tank, in 2000, 52% of Romanians believed that most of corrupt individuals operate among the highest levels of public administration, while only 7% claimed that most corruption happens at street-level bureaucracy. Therefore, it seems clear that Romanians were already exposed to and aware of the country's problem with high corruption before the anticorruption reform was implemented.

## V. Research Design

### 5.1 Methodological Obstacles

I now turn to the main focus of this paper, which is to analyze empirically the relationship between a strong variation in institutional quality and the evolution of social trust among different groups of respondents. This section offers a detailed outline of the empirical strategy, including its structure, scope, advantages, and shortcomings. The study of this research question faces several major methodological difficulties that cannot be overlooked. Some of these difficulties stem from the nature of social trust itself. Indeed, trust is a cultural variable that is deeply entrenched in society, meaning that virtually every kind of social interaction, from the most basic to the most complex, has in it an element of trust, which makes identifying its determinants a particularly difficult task. Thus, the first obstacle that arises in the study of social trust is endogeneity, as the pervasiveness of trust in the social world inevitably complicates any attempts to isolate the causal effects of explanatory variables. This issue is particularly meaningful when it comes to the relationship between trust and the quality of formal institutions, in which case bi-directional causality is not only theoretically plausible, but also empirically justified (Knack 2002). The second problem that arises when investigating the origins of social trust corresponds to the presence of potentially confounding variables. Once again, it is perfectly plausible to assume that the variations in both social trust and institutional quality are caused by a set of unknown variables, which could lead to interpretation errors. Third, it is important to bear in mind that isolating the effect of the treatment itself is also difficult since the gaps between all survey waves are large (i.e. at least four years); for instance, there are several other events that occurred in Romania during the 1999 – 2006 period, besides the creation and reform of the DNA, which could have impacted the evolution of social trust. Lastly, the empirical strategy used in this paper

does not differentiate between the effect of the existence or creation of the anticorruption agency and the outcomes produced by this institution. Therefore, the results cannot be interpreted as evidence of causality.

## **5.2 Outline of Empirical Strategy**

In this paper, I draw upon the difference-in-difference method and use quasi-experimental research design to measure the differential effect of an exogenous variation in institutional quality among different groups of the Romanian population. I perform multivariate linear regression analysis of cross-sectional survey data collected by the World Values Survey and the European Values Survey that span the pre and post-DNA periods in order to assess whether Romania's successful anticorruption efforts had any positive effect on internal levels of generalized and institutional trust. Given the fact that the dependent variables are dichotomous, I use a linear probability model to estimate the respondent's propensity to trust other people and institutions. Generally, traditional difference-in-difference design is executed by performing a comparison between a treatment and control group at two different points in time. It is important to note, however, that causal identification is particularly difficult in this case because all individuals living in Romania have technically benefitted from the creation and subsequent success of the DNA. However, despite the absence of proper treatment and control groups, certain categories of the population were better equipped to perceive and appreciate the scope and value of the DNA's judicial activity, which makes this paper's comparative approach more convincing.

In order to estimate the causal effect of a treatment with the difference-in-difference method, three assumptions must hold, namely exchangeability, stable unit treatment value, and positivity. Exchangeability requires the treatment to be unrelated to the outcome at baseline. In the case of this thesis, this assumption holds true, since the allocation of the

treatment does not seem to be determined the outcome, as I have argued in the previous chapter. The stable unity treatment value assumption requires the composition of the treatment and comparison groups to be stable for repeated cross-sectional design. This assumption also holds true given the sampling method used by the researchers who carried out the WVS and EVS surveys in Romania (i.e. see section 5.3 *Data and Sampling Method* for a more detailed account of how the sample groups were created). Lastly, positivity implies that the treatment and control groups have parallel trends in the outcome variable. Indeed, the parallel trends assumption implies that the pre-treatment trends in the comparison subgroups would have continued to progress at the same pace in the absence of treatment. For instance, this means that the difference in the evolution of social trust among urban and rural individuals in the years leading up to the creation of the DNA should be constant. Although there is no statistical test for this assumption, visual inspection can reveal the existence of parallel trends when there are enough time points. In the case of this research, the parallel trends assumption can only be verified for the first and third hypotheses (i.e. urban v. rural divide; high v. low interest in politics), since data concerning frequency of news consumptions is missing for two out of three pre and post-treatment survey waves.

Formally, the effect of the treatment on the evolution of social trust among respondents based on their geographic location (and frequency of news consumption or political interest) is measured with the regression model below:

$$Y_{it} = \beta_0 + \beta_1 * [\text{treatment}] + \beta_2 * [\text{urban}] + \beta_3 * [\text{treatment} * \text{urban}] + \beta_4 * [\text{covariates}] + \varepsilon$$

Where  $Y_{it}$ , the outcome variable, is the respondent's reported level of generalized or institutional trust, indexed by individual  $i$  and time period  $t$ . The variable *treatment* is a dummy that takes the value of 0 for the years preceding the treatment (i.e. 1993, 1998, 1999, and 2005) and 1 for all the years that followed the treatment (i.e. 2008, and 2012). The

variable *urban* is also a dummy, which indicates the size of the respondent's city, taking the value of 0 for respondents living in a rural setting and 1 for respondents living in urban ones. The interaction between the two dummy variables captures the main effect of interest, which is the effect of being interviewed after the treatment took place moderated by the size of the respondent's city. In the fixed effects models, I add the constants  $\alpha_r$  and  $\alpha_t$  to capture the time-invariant effects of the region and survey year on the outcome variable. I run identical regression models that include the other two variables of interest, namely the frequency of news consumption and political interest. According to my theory, I expect the coefficients of these three interactions to be positive. The fully specified regression model incorporates a set of control variables that I will briefly describe and discuss in the following subsection of the chapter. Lastly, I perform a series of robustness tests in order to verify whether the results of my initial models are consistent.

Regarding the four main methodological obstacles mentioned in the previous subsection, I manage to partially mitigate the effects of bi-directional causality by using a unique variation in institutional quality embodied by the DNA, whose reform and success were independent from the evolution of social trust and rather caused by exogenous factors, such as the enlargement of the EU and the pressure to reform that was exercised by the Member States. Thus, I expect to capture the differential effect of this variation by measuring the interaction effect between the treatment variable and the dummies of the comparison groups. Furthermore, in order to limit the issues caused by confounding variables and improve the robustness of the models, I implement a wide variety of control variables in my models that I interact with the treatment dummy. I provide a more detailed account of all these control variables in the last subsection of this chapter. The models with interactive controls are presented in the robustness test subsection of the following chapter. Third, the issue caused by the limited number of survey waves cannot be effectively solved, however, as

the institutional development of Eastern Europe continues, future researchers will be able to observe certain trends over longer periods of time and therefore offer a more detailed account of research questions such as the one presented in this paper. Lastly, while distinguishing between the effects of the establishment and concrete outcomes of the DNA might be difficult empirically, it is likely that any potential improvements in Romania's internal levels of social trust would result from the actual indictments rather than the creation of the institution. Indeed, most Romanians failed to acknowledge the significance of the reforms that transformed the PNA into the DNA before the first major indictments occurred; in fact, few people were aware that the DNA even existed before its outstanding performance caught the attention of the media and thus became more visible to the general public.

### **5.3 Data and Sampling Method**

*Data.* I use annual individual cross-sectional survey data on people's values and beliefs from Romania, which covers the period 1993 to 2012 and was assembled by a team of researchers on behalf of the *World Values Survey* (i.e. WVS) and the *European Values Survey* (i.e. EVS) with the help of Metromedia Transylvania. The Romanian team, which was coordinated by the Research Institute for Quality of Life of the Romanian Academy for Science, designed the research projects, while following the guidelines of the World Values Survey Association. Although the two research projects were carried out separately, they both use the same questionnaires and sampling methods, which makes it possible to merge the datasets and thus expand the temporal scope of the study. Indeed, both surveys were executed in three waves. As such, the WVS covers the years 1998, 2005, and 2012, while the EVS covers the years 1993, 1999, and 2008. Table 3 provides an overview of the two datasets used in this thesis. Using WVS and EVS data jointly offers a considerable empirical advantage compared to numerous recent studies that explore the origins of social trust by employing two or three-



wave survey data because it offers a more thorough outline of pre and post-treatment attitudinal trends. Furthermore, the timing of the survey waves is also advantageous for the purpose of this thesis: as mentioned previously, the DNA was founded in 2006 and began prosecuting high-profile politicians soon after, which means that the treatment is chronologically situated between the fourth and fifth WVS/EVS survey waves. Nevertheless, it is critical to underline that despite the relatively high frequency of WVS and EVS national-level surveys, isolating the causal effects of single treatment remains incredibly challenging. The drawbacks of using these datasets are twofold. First, large-scale surveys are costly and lengthy to perform, which means that, more often than not, the timing of the surveys does not always align with the treatments, which in turn can hamper causal inference. Second, due to the fact that these surveys are conducted at the regional scale, they fail to capture more localized variation, which could improve the validity of observational studies.

*Sampling Method.* In terms of sampling procedures, the same method was consistently applied to create sample groups in every survey year. Thus, the composition of each group did not change across surveys. The targeted sample size for every wave is 1,500; the population of interest is composed of persons aged 18 – 85 who reside in private households; temporary emigrants, foreigners and homeless people were excluded from the surveys. The sampling frame is the voting precinct used for local elections. Households were recruited using stratified two-stage probability sampling, with stratification in the first stage of the primary selection units (i.e. voting districts) proportional to their number of secondary selection units (i.e. adults registered on voting lists). The two stratification factors used were the socio-cultural area (18 in total) and the type (i.e. level of development) and size of the locality. Thus, in the first stage of the sampling process, a sample of voting districts is selected by using probability proportional to size method; then, 10 registered electors are selected by systemic sampling with equal probabilities from the electoral list of a selected

voting district. To adjust for differential response rate and correctly reproduce the population structure, the final samples are weighted by age, gender, and locality type.

**Table 3:** Overview of WVS/EVS Survey Data

<b>Cross-section</b>	<b>World Values Survey</b>	<b>European Values Survey</b>
No. of waves	3	3
Years of interview	1993 – 1999 – 2005	1998 – 2008 – 2012
Observations (all waves)	4518	3577
Mode of collection	Face-to-face	Face-to-face

## 5.4 Operationalization of Main Variables

*Dependent variable N°1 – Generalized trust.* The study of generalized social trust entails another major difficulty, which is its measurement. Given the difficulty of finding proper behavioral measures of social trust, most authors prefer attitudinal measures, in the form of standard survey questions that gauge variations in a community's beliefs and values. Thus, the question "Generally speaking would you say that most people can be trusted, or that you can't be too careful in dealing with people?" is often used to determine how people evaluate the trustworthiness of the world they live in. In this paper, I measure internal levels of social trust by considering the evolution of the share of respondents claiming that "Most people can be trusted" in surveys.

*Dependent Variable N°2 – Institutional trust.* The causal mechanism entailed by the theoretical argument of this paper suggests that the treatment should first have a positive impact on institutional trust, which would in turn lead to an increase in generalized trust. I operationalize institutional trust in two different ways. First, I use a dummy variable that indicates the respondent's reported confidence in the justice system, since the reform of the DNA represented an improvement in Romania's judiciary above anything else. The variable takes a value of 0 if respondents do not trust the judiciary and a value of 1 if they do. Second, in order to capture the respondent's trust in their country's entire institutional framework, rather than just the judiciary, I build a simple additive scale based on the respondent's confidence in four different institutions, including the Parliament, the Government, the Justice System, and the Police. The scale ranges from 0 (i.e. low trust) to 1 (i.e. high trust).

*Comparison group N°1 – Urban v. rural.* The urban-rural classification can be delineated both in terms of geography as well as population density. While the smallest administrative unit reported in WVS and EVS data is the county and not the city, both datasets offer quite detailed information regarding the size of the towns in which the

interviews took place. Therefore, I create a dummy variable to separate the smallest towns from the larger ones. The variable takes the value of 0 if the town has a population of less than 50,000 inhabitants and 1 if the town has a population of exceeding 50,000 inhabitants. The threshold separating urban and rural communities is justified by the jurisdictional limit placed on the DNA through the Emergency Ordinance No. 134/2005, which excludes small towns and communes. The values of this variable only indicate the size of the respondent's city in the years, 1993, 1998, 1999, 2005, and 2012, but not 2008.

*Comparison group N°2 – Frequent v. infrequent consumer of news.* Access to news sources represents a crucial condition for the theoretical mechanism described in this paper to function as predicted. I create a dummy variable to separate respondents who follow the news less than once a week (i.e. 0) from those who follow the news at least once a week (i.e. 1). It is important to note that this variable has a large amount of missing values due to the fact that the survey question regarding news consumption habits was not asked in every wave. Thus, values only illustrate responses in the years 1999 and 2008, the only two waves during which the question was asked. The original survey question is formulated as follows: “How often do you follow the news?”

*Comparison group N°3 – High v. low political interest.* Interest in politics is also a good indicator of whether the respondent is likely to be affected by the treatment. Therefore, I create another dummy variable that takes the value of 0 if the respondent claims not to be interested in politics and 1 if the respondent is at least somewhat interested in politics. This variable does not suffer from the same missing values issue as the previous one, since the voting-related questions were asked during every survey year with the exception of 1999. The original survey question is formulated as follows: “How interested are you in politics?”

## 5.5 Control Variables

In order to increase the precision of my estimations, I incorporate several control variables in my models. As a robustness check, I interact the control variables with the treatment dummy in order to mitigate the effect of potentially confounding factors. The control variables are organized into two broad categories, namely *socio-economic* and *personal* variables.

*Socio-economic controls.* Past research shows that social trust is positively correlated with economic well-being as well as higher education levels. Thus, in order to account for differences in economic status and education, I include in all my models the respondent's reported income level, which is measured on a 10-point scale (i.e. 1 being the poorest and 10 the wealthiest), and their education level, which is measured on a 3-point scale (i.e. *primary*, *vocational*, or *university*).

*Personal controls.* Similar to socio-economic variables, personal and psychological factors may also affect the evolution of social trust. First, I add age and gender dummy control variables, both of which can also heavily influence an individual's willingness to trust others. Second, I add a dummy variable that indicates the respondent's marital status. Third, given the importance of religion and faith in determining one's outlook and relation to others, I incorporate the respondent's level of religiosity. In order to simplify the interpretation of the this coefficient, I recoded the original religiosity scale, which had the positive responses coded as 1 and the negative ones coded as 4, and inverted their values in order to make sure that higher values had the same substantive meaning as all the rest of the control variables. Thus, religiosity is measured through the question: "How important is religion in your life", with responses ranging from 1 (i.e. not important at all) to 4 (i.e. very important). Although other psychological factors, such as happiness and sense of national pride, have been shown to affect an individual's propensity to trust others, several theoretically important controls

cannot be incorporated into the models since they are likely to also be directly affected by the treatment.

*Year.* In order to control for the linear time trend, I add the year variable as a control, which silences the variation in the outcome variable that is generated by trust evolving linearly over time.

*Fixed effects.* Lastly, in order to account for the time-invariant features of Romania's four developmental regions, I include region fixed effects into the models. Additionally, in order to pick up variations in the outcome happening over time, I also replicate the regression models with survey year fixed effects as a robustness check.

## VI. Results

### 6.1 Descriptive Statistics

Table 4 reports the summary for all the main variables. This table is useful because it simplifies the detection of any potential issues that could affect the outcome of the regression models. In this case, the variables do not seem to suffer from any functional problems. It is worth noting that the limited number of observations for some of the variables, such as the dummies regarding the frequency of news consumption, is due to the fact that some of the survey questions were not asked during every wave. Generally speaking, however, the other important variables do not have too many missing values and therefore reflect the time period accurately.

<b>Table 4: Summary</b> Statistics of WVS/EVS Variables (1990 – 2012)	(1) No. Obs.	(2) Mean	(3) Std. Err.	(4) Min.	(5) Max.
Region	6,767	2.388	1.042	1	4
Treatment	8,256	0.362	0.481	0	1
Generalized Trust	8,256	0.164	0.370	0	1
Institutional Trust	7,930	0.421	0.246	0	1
Confidence in Judiciary	8,256	0.366	0.482	0	1
Urban (Dummy)	6,767	0.324	0.468	0	1
Freq. News (Dummy)	2,635	0.678	0.467	0	1
Pol. Interest (Dummy)	8,256	0.277	0.448	0	1
Income Level	6,469	4.499	2.637	1	10
Education Level	7,019	1.900	0.672	1	3
Married	8,256	0.653	0.476	0	1
Religiosity	8,153	3.299	0.840	1	4
Gender	8,256	1.538	0.499	1	2
Age	8,256	46.68	17.27	18	97



Before transitioning to the parallel trends verification and regression analysis of the WVS/EVS datasets, I run a series of correlations in order to better understand the relationship between the dependent variable, the effect of being interviewed in the pre and post-treatment periods, and the influence of the various characteristics by which I categorize respondents. As shown in Table 5, I find that being interviewed in the post-treatment period, as well as living in an urban environment is negatively correlated with both generalized and institutional trust. However, high frequency of news consumption and political interest are positively correlated with social trust. It is also interesting to note that all these correlations achieve statistical significance, except the dummy that indicates the size of the respondent's frequency of news consumption. The first two results contradict my theory, which argues that people who are more capable of perceiving variations in institutional quality will also tend to experience greater levels of social trust; however, the final two correlations are consistent with my initial predictions. Although these correlations are highly informative, I cannot draw any conclusion without analyzing the effect of interacting the treatment variable with each of the aforementioned conditions, which will be the focus of the next subsection of this chapter.

**Table 5:** Correlations Between Different Types of Trust, Treatment Dummy and Explanatory Variables (p-values indicate statistical significance)

Type of trust	Treatment (post)	Size of city (urban)	Freq. of news consumption (frequent)	Political interest (high)
Generalized trust	- 0.08 (0.00)	- 0.06 (0.00)	0.03 (0.12)	0.02 (0.03)
Institutional trust	- 0.02 (0.07)	- 0.08 (0.00)	0.02 (0.26)	0.02 (0.05)

## 6.2 Verification of Parallel Trends Assumption

In this section, I illustrate the evolution of generalized and institutional trust among the different categories of respondents before and after the institutional treatment occurred. I build a series of graphs that indicate the variations in the share of respondents claiming that most people can be trusted among comparison groups for every available survey year. I replicate the same graphs illustrating the share of respondents reporting high levels of confidence in the judiciary for each comparison group. These figures are useful since they facilitate the visual identification of the differential effect of the treatment between respondent groups. Furthermore, these figures also allow me to visually verify whether the parallel trends assumption holds true in the case of the dummy variables that separate rural respondents from urban ones as well as the one indicating the respondent's level of political interest. As mentioned earlier, the parallel trends assumption cannot be verified for the dummy of frequency of news consumption, since that variable was only measured in two survey waves.

Figure 4 presents the pair of graphs comparing the evolution of two different kinds of social trust among urban and rural respondents before and after the treatment was administered. In both cases, the graphs illustrate similar global trends for the two categories of respondents. Generally speaking, rural respondents seem to be more trusting than their urban counterparts. The differential effect of the treatment is not visible, since generalized trust decreases in both comparison groups after the implementation of the judicial reform in the period following 2005; however, the urban and rural respondents' confidence in the judiciary experiences a slight increase after 2005. Visual analysis also indicates that the parallel trends assumption is violated in both cases, as the differences in social trust between the comparison groups are not constant throughout the pre-treatment period. Although visual inspection indicates that the difference-in-difference approach can only be imperfectly

applied, this method of analysis remains fundamentally limited and the data deserves to be explored further through regression models.

**Figure 4:** Yearly Evolution of Levels of Social Trust among Urban and Rural Respondents (share of respondents saying “most people/justice system can be trusted”)

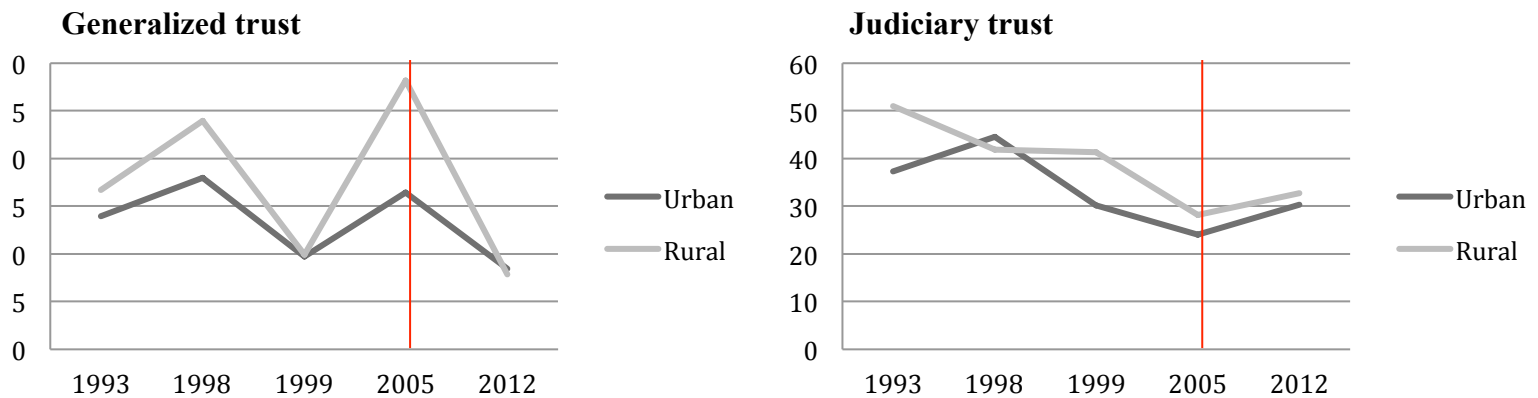
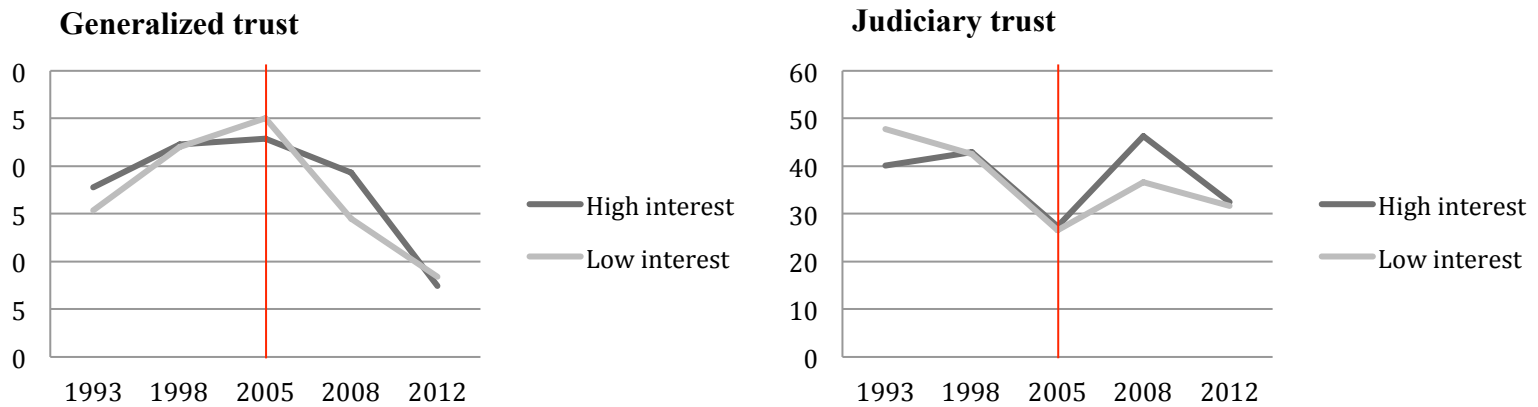


Figure 5 presents the same graphs as Figure 4, but comparing respondents based on their reported level of interest in politics, rather than the size of their city. The results, however, are relatively similar. Although there do not seem to be any differences in either generalized or judiciary trust between the comparison groups in the pre-treatment period, both categories experience an almost identical variation in the outcome over time. It is interesting to note that, once again, the level of generalized trust declines following the treatment period, but it does so less steeply among respondents who report greater interest in politics. Similarly, the respondents' confidence in the judiciary increases in both comparison groups, but does so more drastically among individuals who are interested in politics. Yet again, the parallel trends assumption does not hold; however, in both graphs, the pre-treatment trends in reported trust are almost identical in the comparison groups, but diverge after the administration of the treatment in 2005 – two observations that support my initial hypotheses. Once again, I conclude that the visual evidence presented in these graphs suggests that the

results of the difference-in-difference estimation should be interpreted with caution, but also that the treatment's differential effect might have existed nonetheless.

**Figure 5:** Yearly Evolution of Levels of Social Trust among Respondents with Different Levels of Political Interest (share of respondents saying “most people/justice system can be trusted”)



### 6.3 Primary Results

The descriptive statistics presented in the previous subsection show mixed results. In the following subsections, I begin the analysis of the primary empirical results of this paper: I run the main linear probability regression models, describe the results, and interpret them by referring to my initial theoretical framework. In terms of statistical significance, I seek a 95% confidence in my results and therefore set the  $\alpha$  threshold at 0.05. Furthermore, I avoid heteroskedasticity by calculating robust standard errors. Addressing the issue of spatial correlation and accounting for the clustering of the treatment assignment is difficult since the WVS/EVS datasets do not provide any information regarding the town or locality in which the surveys were conducted; in fact, the smallest administrative unit included in the datasets is the county, however, a large share of respondents is only categorized by macro-region. The main coefficients of interest that I analyze are the interaction terms between the treatment dummy and the different respondent conditions, which should indicate whether having a

greater ability to perceive and appreciate the institutional improvement embodied by the DNA would also increase the respondent's propensity to trust other people or institutions. I expect the coefficients of the interactions between the treatment variable, the size of the city, the frequency of news consumption, and level of political interest to be both positive and significant. The regression is structured as follows: first, I regress the dependent variables of generalized trust and confidence in the judiciary on the treatment dummy followed by an interaction between the treatment and the three key variables by which I categorized respondents. I then add control variables sequentially in order to verify whether the results remain consistent; I incorporate socio-economic controls, namely *Income* and *Education Level*, first, and add personal controls, namely *Marital Status*, *Gender*, and *Age*, second. None of the models suffer from either multicollinearity or omitted variables, except for the ones presented Table 7, in which the main explanatory variable is the frequency of news consumption.

### 6.3.1 Regression for Social Trust and Size of City

Table 6 presents six models where I regress the dichotomous variables of confidence in the judiciary branch, which is the first and most important indicator of institutional trust, and generalized trust on the variables of *Treatment* and *Urban*, using the linear probability method. Models (1) and (4) only include the *Treatment* and *Urban* dummies, as well as their interaction coefficient, with no other controls. As mentioned previously, I progressively incorporate the two categories of controls, in Models (2) and (5) for socio-economic controls, and Models (3) and (6) for personal ones.

In my theory, I argue that proximity to the treatment should make it easier for individuals to acknowledge an institutional improvement, such as the one embodied by the DNA, since they would be better equipped to understand the importance of the indictment of

high-profile individuals. In the case of this paper, the comparison between urban and rural respondents is particularly meaningful since the DNA's jurisdictional power encompassed only large cities and the high-level officials that operated within them. Thus, I predict the urban status of respondents who were surveyed after the treatment has been administered to have a positive and significant influence on their propensity to trust both the country's judiciary as well their fellow citizens.

The coefficients estimated in Table 6 seem to partly support this paper's central theoretical argument. First, the interaction coefficient between the *Treatment* and *Urban* dummies is positive in the first three models, which focus on the respondent's confidence in the judiciary; however, the coefficients fail to reach statistical significance and are therefore not particularly informative regarding the relationship between the treatment, the respondent's location and confidence in judiciary. Furthermore, the interaction coefficient is also positive for the last three models, which hold generalized trust as the dependent variable, while also achieving statistical significance at the 0.01 level. This result suggests that living in an urban environment (relative to living in a rural one), after the treatment has been administered, increases the individual's propensity to trust others by 6 percent. It is also interesting to note that the substantive and statistical significance of the coefficients remains relatively stable, as the controls are progressively incorporate in the models. These results seem to partly support *Hypothesis<sub>1</sub>*, since the interaction coefficient has the expected direction. However, the fact that the interaction term fails to reach statistical significance in the first three models is rather unexpected, since the theoretical argument presented in this paper posits that individuals first update their views on the institutions before heuristically deciding whether or not to become more trusting towards other people.

Lastly, while the effects of the *Treatment* and *Urban* dummies are only interesting when analyzed in conjunction with one another, it might be interesting to note that both

variables have negative and statistically significant individual effects on both types of social trust. Similarly, although control variables are not the main element of study of this thesis, it should be noted that *Income* and *Education Level* have a negative sign throughout the six models. Both the size and direction of these coefficients remain consistent within the rest of the models analyzed in this paper.

<b>Table 6: Linear Regression Models for Social Trust and Size of City</b>	(1) Judiciary Trust	(2) Judiciary Trust	(3) Judiciary Trust	(4) Generalized Trust	(5) Generalized Trust	(6) Generalized Trust
Treatment*Urban	0.0369 (0.0291)	0.000257 (0.0308)	0.00528 (0.0305)	0.0666*** (0.0187)	0.0675*** (0.0200)	0.0631*** (0.0200)
Income Level		-0.00934*** (0.00254)	-0.000397 (0.00278)		-0.00320 (0.00201)	-0.00841*** (0.00216)
Education Level		-0.0176* (0.0107)	-0.0450*** (0.0113)		-0.00138 (0.00839)	0.00817 (0.00890)
Married			-0.00562 (0.0140)			-0.00817 (0.0108)
Gender			0.00812 (0.0131)			-0.0143 (0.0101)
Age			-0.00141*** (0.000416)			0.000173 (0.000322)
Survey Year			-0.0204*** (0.00255)			0.0120*** (0.00219)
Constant	0.390*** (0.00818)	0.425*** (0.0205)	41.39*** (5.105)	0.208*** (0.00681)	0.227*** (0.0168)	-23.78*** (4.383)
Observations	6,767	5,266	5,264	6,767	5,266	5,264
R-squared	0.005	0.006	0.022	0.019	0.025	0.032

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1



### 6.3.2 Regression for Social Trust and Frequency of News Consumption

Table 7 presents six models in which I analyze the relationship between the two main dependent variables and the respondent's frequency of news consumption. The table has the same structure as the previous one, with controls being added sequentially in order to test the robustness of the interaction term. It might be worth noting that the treatment dummy is omitted from the models once the *Income Level* control is introduced due to collinearity. Therefore, I use another relatively compelling, albeit imperfect, proxy for the respondent's economic status, namely the dummy variable *Unemployment*, which takes the value of 0 if the respondent is employed and 1 if he is unemployed.

Theoretically, I expect the interaction coefficient between the treatment dummy and the respondent's frequency of news consumption to be both positive and significant since the indictments of corrupt high-level figures by the DNA systematically received extensive media coverage, which means that individuals who consume more news automatically have greater exposure to the DNA's activity.

The results presented in Table 7 are more encouraging relative to the previous one. First, it is interesting to note that the interaction term is both positive and statistically significant at the 0.05 level across the first three models. Additionally, the substantive size of the coefficients is not only quite large, but also remains virtually intact after controls are added in Model (3). Thus, according to the fully specified Model (3), being a frequent consumer of political news (relative to not being one) after the treatment has been administered increases one's probability to declare a high level of confidence in the justice system by 8 percent. Models (4) to (6) are relatively similar: the interaction term between the two explanatory variables is positive and its substantive size is stable throughout each of the three estimations; however, none of the interaction coefficients achieve statistical significance, which complicates their interpretation.

<b>Table 7:</b> Linear Regression Models for Social Trust and Freq. of News	(1) Judiciary Trust	(2) Judiciary Trust	(3) Judiciary Trust	(4) Generalized Trust	(5) Generalized Trust	(6) Generalized Trust
Treatment	-0.0430 (0.0349)	-0.0283 (0.0354)	-0.0298 (0.0353)	0.0465** (0.0220)	0.0473** (0.0220)	0.0475** (0.0221)
Freq. Pol. News	-0.0590* (0.0325)	-0.0439 (0.0332)	-0.0382 (0.0335)	0.0122 (0.0193)	0.0164 (0.0192)	0.0216 (0.0199)
Unemployed		0.0641 (0.0456)	0.0434 (0.0462)		-0.0425* (0.0249)	-0.0502** (0.0255)
Education Level		-0.0321** (0.0146)	-0.0489*** (0.0153)		-0.00502 (0.00993)	-0.0122 (0.0107)
Married			0.0105 (0.0202)			0.0129 (0.0139)
Gender (female)			0.00948 (0.0196)			0.0203 (0.0136)
Age			0.00212*** (0.000587)			-0.00104** (0.000408)
Treatment*News	0.0924** (0.0419)	0.0781* (0.0424)	0.0842** (0.0424)	0.0269 (0.0273)	0.0222 (0.0272)	0.0237 (0.0272)
Constant	0.420*** (0.0280)	0.461*** (0.0362)	0.566*** (0.0615)	0.0897*** (0.0162)	0.0988*** (0.0230)	0.118*** (0.0410)
Observations	2,635	2,611	2,611	2,635	2,611	2,611
R-squared	0.002	0.005	0.010	0.010	0.011	0.014

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### 6.3.3 Regression for Social Trust and Interest in Politics

Table 8 contains a set of six models which describe the relationship between the two dependent variables, namely generalized and judiciary trust, and the respondent's reported level of interest in politics, which is interacted with the treatment dummy. Structurally, the table uses the same formula as the two previous ones.

The theoretical mechanism presented in this paper suggests that perceiving an institutional variation is not sufficient to trigger a change in behavior or attitude. Individuals must also appreciate the importance of that variation and actually conceptualize it as an improvement. It is therefore evident that respondents who report being highly interested in politics will be more likely to follow the DNA's fight against corruption and understand the importance of the indictment of powerful public figures for their country's future. Given the decisive role of political interest in determining one's likelihood to be affected by the treatment, I expect the interaction term between the treatment dummy and the variable of political interest to be both positive and significant.

Once again, the coefficients presented in Table 8 show mixed results. The interaction term between the treatment dummy and the variable indicating the respondent's level of political interest is positive across the first three models, but achieves statistical significance at the 0.05 level only when controls are not taken into account. Additionally, the coefficient's substantive size diminishes and ultimately changes its direction, as controls are progressively added (i.e. from 0.06 to  $-0.01$ ), which means that the initial relationship between interest in politics and confidence in the judiciary following the administration of the treatment does not seem to be robust. The interaction coefficients for the models that focus on generalized trust do not fare any better. Indeed, the interaction terms appear to be negative and statistically significant at the 0.05 level, while their substantive size remains almost intact once controls are introduced. These findings clearly contradict *Hypothesis<sub>3</sub>* and suggest that political

interest might actually negatively affect an individual's propensity to become more trusting towards others – the exact opposite effect of what was initially predicted. However, it is still worth noting that the interaction term loses its statistical significance after transitioning to the fully specified Model (6), which means that any conclusion regarding its influence would still be premature.

<b>Table 8:</b> Linear Regression Models for Social Trust and Interest in Politics	(1) Judiciary Trust	(2) Judiciary Trust	(3) Judiciary Trust	(4) Generalized Trust	(5) Generalized Trust	(6) Generalized Trust
Treatment	-0.0334** (0.0132)	-0.0171 (0.0180)	0.224*** (0.0333)	-0.0644*** (0.00944)	-0.0984*** (0.0116)	-0.230*** (0.0285)
Pol. Interest	-0.0205 (0.0156)	0.00783 (0.0178)	0.0369** (0.0181)	0.0387*** (0.0132)	0.0411*** (0.0153)	0.0262* (0.0158)
Income Level		0.00967*** (0.00252)	-0.000034 (0.00278)		-0.00381* (0.00202)	-0.00917*** (0.00218)
Education Level		-0.0223** (0.0105)	-0.0541*** (0.0111)		-0.0124 (0.00839)	-0.00186 (0.00890)
Married			-0.00522 (0.0140)			-0.00590 (0.0107)
Gender			0.0119 (0.0132)			-0.0137 (0.0102)
Age			0.00149*** (0.000415)			0.0000813 (0.000322)
Year			-0.0211*** (0.00258)			0.0118*** (0.00225)
Treatment*Interest	0.0687*** (0.0242)	0.00488 (0.0310)	-0.0159 (0.0309)	-0.0233 (0.0183)	-0.0456** (0.0209)	-0.0339 (0.0212)
Constant	0.375*** (0.00763)	0.426*** (0.0206)	42.73*** (5.158)	0.180*** (0.00605)	0.221*** (0.0169)	-23.43*** (4.489)
Observations	8,256	5,266	5,264	8,256	5,266	5,264
R-squared	0.001	0.006	0.022	0.009	0.023	0.030

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

### 6.3.4 Regression for Institutional Trust and Explanatory Variables

Table 9 replicates the models presented above but incorporates a different measure of the dependent variable of institutional trust. Instead of the narrow proxy of confidence in the justice system, I use a 1-point scale that aggregates the respondent's overall confidence in the four major institutions of the state, namely the Parliament, the Government, the Judiciary, and the Police. Measuring variations in the respondent's confidence in the state's institutions through such a scale can be insightful, since it operationalizes institutional trust more broadly. In that sense, it is plausible to assume that even among the respondents who perceived and appreciated the DNA's judicial activity, some might have attributed that success to the country's broader institutional framework, rather than solely the justice system.

Table 9 provides an interesting set of results. Indeed, the interaction terms for all of the three key explanatory variables are positive when using the scale of institutional trust rather than the dichotomous variable of confidence in the judiciary. First, the interaction term between the treatment dummy and the variable that determines the respondent's urban or rural status is not statistically significant – a result that is consistent with the findings shown in Table 6. Furthermore, the coefficient of the interaction between variables of treatment and frequency of news consumption is positive, statistically significant at the 0.05 level, and substantively large (i.e. 0.1). This result also aligns with the results of Table 7. Lastly, the interaction implicating the variable of political interest is also positive and significant – a surprising outcome given the results of the same interaction for the models holding judiciary trust as dependent variable.

<b>Table 9:</b> Linear Regression for Institutional Trust and Explanatory Variables	(1) Institutional Trust	(2) Institutional Trust	(3) Institutional Trust
Treatment	0.0687*** (0.0172)	-0.0783*** (0.0199)	0.0592*** (0.0178)
Urban	-0.0280*** (0.00875)		
News		-0.0530*** (0.0190)	
Pol. Interest			0.0182** (0.00879)
Income	0.00585*** (0.00147)		0.00570*** (0.00147)
Education	-0.0373*** (0.00582)	-0.0238*** (0.00810)	-0.0454*** (0.00574)
Married	-0.000464 (0.00736)	0.0163 (0.0107)	0.000745 (0.00733)
Gender	0.0112* (0.00675)	0.0125 (0.0101)	0.0146** (0.00681)
Age	0.000471** (0.000222)	-3.17e-05 (0.000313)	0.000354 (0.000222)
Year	-0.00831*** (0.00135)		-0.00856*** (0.00137)
Treatment*Urban	0.0114 (0.0161)		
Treatment*News		0.109*** (0.0233)	
Treatment*Interest			0.0423*** (0.0161)
Constant	17.06*** (2.693)	0.501*** (0.0327)	17.55*** (2.731)
Observations	5,032	2,501	5,032
R-squared	0.023	0.017	0.025

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

## 6.4 Robustness Tests

In this subsection, I perform several robustness tests in order to verify whether the statistical relationships that I identified in the first half of this chapter remain relevant when using different kinds of models.

In Table 10, which can be found in Appendix 1, I estimate the same models that appear in Tables 6 to 9, but I use logistic instead of linear regression. Some authors argue that logistic regression is better suited to analyze variations in binary outcomes, such as social trust, since it transforms the dependent variable so that it is distributed as a log-odds density function. Also, while the estimated magnitude of the predictor variables must be interpreted in a slightly different way in logistic models compared to linear ones, the interpretation of the coefficient's direction and statistical significance remains the same. Thus, the interaction coefficients presented in Table 10 clearly prove that the original regression results maintain their direction, substantive size, and statistical significance throughout the six estimated models. Nevertheless, it is important to keep in mind the logistic transformation of the outcome might induce nonlinearity and therefore violate the parallel trends assumption, which means that results should yet again be interpreted cautiously.

In Table 11, which can be found in Appendix 2, I account for the time-invariant effects of Romania's regions that could affect the variations in the outcome variable of the respondent populations. In order to do so, I replicate the original regression models and incorporate regional fixed effects. I generate a new variable that assigns the respondent's geographic location to one of Romania's four development regions (i.e. macro-regions). Furthermore, instead of controlling for a linear time trend, I add survey year fixed effects in order to better control for changes over time in mean responses across surveys. Lastly, in order to check for potentially confounding variables, I interact all the control variables with the treatment dummy. The results presented in Table 11 are almost identical to the ones



shown in the previous tables; I therefore conclude that my findings are robust even when adding fixed effects

## VII. Conclusion and Discussion

### 7.1 Summary of Findings and Discussion of Results

This analysis has attempted to use cross-sectional data taken from three rounds of WVS surveys and three rounds of EVS surveys carried out in Romania between 1993 and 2012, in order to address the question of whether an exogenous improvement in the Romanian state's ability to reduce corruption would have a stronger impact upon the evolution of social trust among respondents who are more likely to perceive and appreciate such a change.

I estimate multiple linear probability regression models in order to calculate the probability of observing an adjustment in attitudes of trust among the people who fulfill the conditions that are necessary in order to perceive and appreciate the DNA's fight against corruption. The regression tables indicate the following results: first, I find that the interaction between the treatment and urban dummy seems to have a positive and statistically significant differential effect among urban respondents as opposed to rural ones, but only when generalized trust, rather than judiciary trust, is held as the dependent variable. Second, I find that respondents who are frequent consumers of political news are more likely to adopt a more trusting attitude towards the justice system but not towards their fellow citizens after the treatment has occurred, compared to infrequent newsreaders. Third, I find no empirical support regarding the hypothesis according to which the introduction of the treatment should lead to a more meaningful increase in generalized or judiciary trust among people with greater interest in politics. Lastly, I replace the variable of judiciary trust with a broader indicator of trust in the state's entire institutional framework, which yields positive results for the last two explanatory variables. Therefore, while empirical analysis of WVS/EVS data does not fully align with my initial predictions, some key results support my theoretical argument. First and foremost, *Hypothesis<sub>1</sub>*, which predicted that the treatment would have a

stronger effect on the evolution of social trust among urban respondents, is validated but only for generalized, rather than judiciary trust. *Hypothesis<sub>2</sub>*, which predicted that frequent consumers of political news were more likely to report higher levels of social trust after the introduction of the treatment, is also partly validated, since the results are statistically significant only for judiciary trust, but not generalized trust. Lastly, I reject *Hypothesis<sub>3</sub>*, which states that people who have a greater interest in politics are more likely to become more trusting in the period following the treatment, since the interaction coefficients estimated in the two fully specified models both fail to reach statistical significance, while also being substantively small. However, it is crucial to reiterate that given the deficiencies of this paper's research design, as well as the limitations of the datasets, these results cannot be interpreted as evidence of causality.

These results seem to indicate that there might be a positive relation between the treatment and some respondents' propensity to adopt more trusting behavior both towards people in general and to formal institutions (at least when they are all lumped together). Nevertheless, it is important to note that the estimated coefficients of institutional trust models do not mirror the ones found in generalized trust models, which suggests that the theoretical mechanism proposed in this paper should be revisited. Ultimately, some of the regression results are difficult to interpret and do not have an obvious explanation. These results can be broadly divided into two categories. The first category is composed of the coefficients that have the expected direction but are substantively small. This could potentially be explained by the fact that the magnitude of the treatment was not large enough to prompt enough people to modify their attitudes. This criticism is plausible since the presence of the DNA was mostly noticed in Romania's largest cities, such as Bucharest. Similarly, although the DNA's effectiveness was greater than anyone in Romania had originally expected, high-level corruption remains high compared to most other EU countries.

The second category is composed of the coefficients that have an unexpected direction. This set of results suggest that the increase in the amount of indictments of corrupt officials could have a negative effect on internal levels of trust by revealing to the general public a reality that they had previously ignored.

## 7.2 Conclusion

The findings of this paper hold notable policy implications. As mentioned in the introductory chapter of this thesis, trust is a societal resource that acts as a lubricant for social interactions. Understanding how social trust is formed is therefore a powerful lesson to learn. The modest yet relatively encouraging findings of this paper suggest the quality of formal institutions could potentially influence the trust attitudes of the citizens who are governed by them. Although this thesis focuses on a very specific institutional improvement, embodied by the establishment of an anticorruption agency, the same mechanism can be extended to other institutions and aspects of institutional quality, such as effectiveness of governance, regulatory transparency etc.

The contributions of this paper to the literature on social trust are twofold. On the one hand, by incorporating insights from the field of psychology, I provide a new theoretical mechanism that could explain how people's attitudes of trust change depending on the institutional environment in which they live. On the other hand, I also make an empirical contribution to the debate regarding the origins of social trust by exploiting a unique institutional variation that has not been studied before.

In terms of avenues for future research, I believe that the radical ongoing transformation of Eastern Europe will continue to provide exciting opportunities for experimental studies. For those specifically interested in the relationship between corruption, formal institutions, and social trust, incorporating more direct evidence of corruption

revelations would facilitate the differentiation between the effect to the existence of anticorruption institutions, such as the DNA, and the outcomes of their activity. Lastly, more fine-grained (i.e. temporally and geographically localized) survey data could also improve the validity of comparative studies such as the one that was performed in this paper.

## VIII. Appendix

### 1. Robustness Check A

<b>Table 10:</b> Logistic Regression for Social Trust and Explanatory Variables	(1) Judiciary Trust	(2) Judiciary Trust	(3) Judiciary Trust	(4) Generalized Trust	(5) Generalized Trust	(6) Generalized Trust
Treatment	0.988*** (0.156)	-0.126 (0.148)	1.044*** (0.163)	-2.039*** (0.203)	0.484** (0.240)	-1.784*** (0.208)
Urban	-0.118 (0.0793)			-0.376*** (0.0993)		
News		-0.162 (0.140)			0.232 (0.236)	
Pol. Interest			0.166** (0.0826)			0.161* (0.0963)
Income	-0.00154 (0.0127)		0.000347 (0.0127)	-0.0629*** (0.0169)		-0.0689*** (0.0170)
Education	-0.210*** (0.0525)	-0.210*** (0.0666)	-0.252*** (0.0520)	0.0700 (0.0678)	-0.104 (0.0951)	-0.00630 (0.0675)
Married	-0.0246 (0.0637)	0.0454 (0.0858)	-0.0224 (0.0635)	-0.0564 (0.0826)	0.114 (0.123)	-0.0387 (0.0819)
Gender	0.0375 (0.0597)	0.0409 (0.0831)	0.0544 (0.0604)	-0.107 (0.0773)	0.175 (0.119)	-0.103 (0.0777)
Age	0.00649*** (0.00191)	0.00902*** (0.00252)	0.00688*** (0.00191)	0.00141 (0.00244)	-0.00902** (0.00360)	0.000650 (0.00243)
Year	-0.0939*** (0.0121)		-0.0969*** (0.0122)	0.0792*** (0.0140)		0.0787*** (0.0143)
Treatment*Urban	0.0256 (0.143)			0.479** (0.229)		
Treatment*News		0.357** (0.178)			0.125 (0.277)	
Treatment*Interest			-0.0695 (0.142)			-0.262 (0.228)
Constant	188.0*** (24.13)	0.300 (0.259)	193.9*** (24.45)	-159.5*** (28.04)	-2.094*** (0.385)	-158.4*** (28.67)
Observations	5,264	2,611	5,264	5,264	2,611	5,264

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## 2. Robustness Check B

<b>Table 11:</b> Linear Regression Models with Year/Region Fixed Effects	(1) Judiciary Trust	(2) Judiciary Trust	(3) Judiciary Trust	(4) Generalized Trust	(5) Generalized Trust	(6) Generalized Trust
Treatment	0.437*** (0.155)		0.430*** (0.153)	-0.130 (0.117)		-0.125 (0.117)
Urban	-0.0224 (0.0179)			-0.0532*** (0.0143)		
News		-0.00408 (0.0390)			0.0224 (0.0221)	
Pol. Interest			0.0324* (0.0194)			-0.00518 (0.0174)
Income	-0.00392 (0.00471)	-0.0199** (0.00897)	-0.00491 (0.00463)	-0.00168 (0.00400)	0.00471 (0.00548)	-0.00407 (0.00395)
Education	-0.0266* (0.0136)	-0.0321 (0.0275)	-0.0330** (0.0134)	-0.00733 (0.0116)	0.00843 (0.0181)	-0.0150 (0.0114)
Married	0.0491** (0.0191)	0.0266 (0.0402)	0.0512*** (0.0189)	0.000689 (0.0157)	-0.0127 (0.0237)	0.00618 (0.0156)
Gender	0.0129 (0.0156)	-0.00477 (0.0319)	0.0163 (0.0158)	-0.0173 (0.0130)	-0.0121 (0.0202)	-0.0205 (0.0131)
Age	0.00366*** (0.00106)	0.0101*** (0.00193)	0.00375*** (0.00105)	0.0106*** (0.000771)	0.000165 (0.000524)	0.0102*** (0.000750)
Treatment*Urban	0.0109			0.0456**		
Treatment*Interest			0.0182 (0.0323)			-0.00217 (0.0227)
Constant	0.419*** (0.100)	0.948*** (0.181)	0.419*** (0.100)	0.100 (0.0742)	0.0321 (0.0602)	0.121* (0.0729)
Observations	5,264	1,054	5,264	5,264	1,054	5,264
R-squared	0.066	0.098	0.067	0.075	0.097	0.072

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

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