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QUALITY OF JUDICIAL INSTITUTIONS, CRIMES, MISDEMEANORS, AND DISHONESTY

Naci H. Mocan
Samantha Bielen
Wim Marneffe

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ABSTRACT

We investigate the extent to which the quality of judicial institutions has an impact on individuals' propensity for criminal and dishonest behavior and on their views regarding the acceptability of dishonesty and law-breaking. We use micro data on residents of 25 European countries and employ alternative measures of judicial quality. Acknowledging that the quality of judicial institutions is endogenous, we employ as an instrument the procedures with which prosecutors and judges are appointed to their posts in each country. The results reveal that an increase in the quality of judicial institutions, such as an improvement in judicial independence or the impartiality of the courts, has a deterrent effect on dishonest and criminal acts. A higher quality judicial system makes individuals less likely to find acceptable a variety dishonest and illicit behaviors, suggesting that institutions help shape the beliefs of the society.

Naci H. Mocan
Department of Economics
Louisiana State University
2439 BEC
Baton Rouge, LA 70803-6306
and NBER
mocan@lsu.edu

Samantha Bielen
Hasselt University
Agoralaan 30, Building D
3590 Diepenbeek, Belgium
samantha.bielen@uhasselt.be

Wim Marneffe
Hasselt University
Agoralaan 30, Building D
3590 Diepenbeek, Belgium
wim.marneffe@uhasselt.be

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I. Introduction

There are substantial differences between countries in the extent to which people consider illegal or dishonest behavior acceptable. For example, to the question of "How wrong is it to buy something you thought might be stolen?" only 3.8 percent of people in Denmark respond to indicate that it is "Not wrong at all" or "A bit wrong." The approval rate of the act of buying a stolen good is 12.4 percent in the Netherlands, 18.1 percent in Bulgaria, 22.4 percent in France, and 30.4 percent in Russia. While 13.2 percent of Ukrainians find that bribery is "not wrong at all", or "a bit wrong," only less than one percent of people in Iceland think that bribery is acceptable behavior. The approval rate of bribery is 3.2 percent in Germany, 5.7 percent in Belgium, and 6.8 percent in Spain.[1]

As there are significant differences between countries in the rate at which people tolerate dishonesty, there is a similarly sizable between-country variation in crime rates, corruption and other illegal activity. In 2011 there were 1,750 reported thefts per 100,000 inhabitants in Italy, but the rate was 931 in Portugal, and 605 in Poland.[2] The murder rate in that year was 0.88 in Denmark, 1.08 in Portugal, and 2.29 in Turkey in that same year. While some of these differences in crime rates can be explained by variations in

[1] These statistics are calculated using the data employed in this paper. The details of the data are provided in Section III.

[2] The crime statistics are obtained from Eurostat. Statistics are reported d for 2011 because that is the last year which is covered in our analysis sample.

deterrence, labor market conditions and income levels between countries, a significant amount of variation in illegal activity remains unexplained.[3]

Motivated by these observations, and to provide new insights into the question of "Why does *illegal activity* and *its acceptability* vary so much by country?" in this paper we investigate the extent to which differences in the quality of judicial institutions between countries help explain the differences in *criminal and dishonest behavior*, as well as the *acceptability of such behavior*. Specifically, we analyze whether the quality of a country's legal institutions has an impact on individuals' propensity to engage in illicit activity in that country, ranging from falsifying official documents to buying stolen goods to concealing the defects of a second-hand product when selling it. We also analyze whether the quality of the judicial system has an impact on people's *beliefs* regarding the *acceptability* of dishonesty and law-breaking, ranging from tax evasion to bribery, from exaggerating an insurance claim to acting dishonestly to make money.

We use micro data on the residents of 25 European countries who are surveyed between 2004 and 2011 to investigate whether indicators of judicial quality, such as the independence of the country's judiciary, the impartiality of the courts, or the protection of property rights have an impact on citizens' proclivity to break the law or to engage in dishonest activity, and on the extent to which people believe that dishonest behavior is acceptable.

[3] Some of these differences in crime rates may be attributed to dissimilarities in the classification of crimes and in the reporting rates between counties (Soares 2004). Because murder is a crime which is reported accurately in most countries, cross-country comparisons based on murder should be more reliable.

The paper makes contributions to two areas of investigation. First, it contributes to the economics of crime literature by adding the quality of the judicial system to the economic analysis of criminal decision-making. Research in economics has produced significant amount of credible information regarding the causal impact of key determinants of criminal activity (Drago et al. 2009, Mocan and Bali 2010, Corman and Mocan 2005, Machin and Meghir 2004, Di Tella and Schargrodsky 2004, Raphael and Winter-Ebmer 2001, Corman and Mocan 2000). The variation in crime rates between countries, however, cannot be fully explained by making use of the causal estimates of the determinants of crime obtained from existing studies. Thus, judicial quality might help add to our understanding of the variation in illicit activity between countries.

Judicial system's lack of independence and the absence of impartiality of the courts may provide signals to the citizens about the ambiguity and unfairness of judicial decisions. Houser, Vetter and Winter (2012) find in a laboratory experiment that people, who believe that they were treated unfairly during an interaction with another person, are more likely to cheat in an unrelated subsequent game.[4] This suggests that if poor judicial quality and biased court decisions alter people's perceptions of the fairness of the judicial system, this could impact their propensity of rule violation and law breaking.

Relatedly, a decay in the quality of institutions is expected to reduce the perceived certainty of punishment if deterioration in judicial quality leads to inefficiency and uncertainty in the criminal justice system. This may, in turn, lead to increased propensity to disregard the rule of law.[5] Evidence on this point is presented by Dusek (2015) who finds

[4] Those who cheat in the lab are also likely to cheat outside of the lab (Potters and Stoop 2016).
[5] This is also similar to the relationship between uncertainty in legal labor market returns and its impact on criminal propensity (Mocan et al. 2005).

that quick resolution of criminal cases leads to a decline in burglary and embezzlement. Consistent with the arguments listed above, we find evidence that low judicial quality makes people more likely to engage in illegal and dishonest acts.

The second contribution of the paper is its demonstration that the quality of judicial institutions has an impact on beliefs and attitudes. Gaehter and Schulz (2016) find that the proportion of young people who cheat in a lab experiment is positively correlated with the prevalence of rule violation in the country, which leads the authors to argue that institutions and culture influence the prevalence of rule violation in the society, which in turn impacts peoples' intrinsic honesty. Of course it can also be argued that intrinsic honesty, as a cultural trait, has an impact on the prevalence of rule violation. More precisely, a cultural belief or attitude such as tolerance for dishonesty, will impact the propensity for rule violation and unlawful behavior. At the same time, the extent of the rule violation in the society will have an impact on the tolerance for and the acceptability of rule violation.

If most people in a society approve a certain behavior as appropriate and acceptable, that particular behavior can be thought of as part of the culture of the society. Cultural beliefs and values of a society, even those that are based on superstition, can be persistent across many generations (Mocan and Yu 2017). Yet, beliefs are also malleable and they react to the economic social environment.[6] Giavazzi et al. (2014) formulate the evolution of values and beliefs as being driven by vertical and horizontal transmissions. Vertical transmission pertains to shaping the beliefs and values of children within the

[6] Even feelings that can be thought of as having been deeply engrained in the fabric of culture, or in human psyche, respond to economic and social environment. For example, people's racist, xenophobic and anti-Semitic attitudes (Mocan and Rashke 2016) and even vengeful feelings (Mocan 2013) are influenced by economic and social circumstances.

family so as to make it easier for the offspring to function better in the society. But, individuals are also exposed to the environment outside of the family, and the sanctions and incentives of the institutional and social environment shape beliefs and values as well, constituting the horizontal transmission of values. The authors write that "Vertical transmission, like genetic inheritance, tends to be relatively more conservative, giving rise to slow evolution of culture; horizontal transmission, as in an epidemic, may result in a rapid change in the number of people who adopt a new cultural characteristic particularly if it is attractive to the receiver." (Giavazzi et al. 2014, p.2). Investigating whether immigrants' beliefs and values remain unchanged across generations or whether they change quickly to conform to the prevailing norm in the destination country, the authors find that while some cultural beliefs and values (inherited from the country of origin) are highly stable across generations, others converge quickly to the prevailing norms.

Di Tella, Galiani and Schargrodsky (2007) find that following the passage of an expropriation law which intended to grant private land to squatters, some squatter families obtained property rights to the land they occupied, while others could not do so because the original owners contested the law in court. The authors show that this differential experience of being able to obtain the title of the land vs. being unable to do so altered the beliefs of the squatters about the merits of the free market, and in favor of materialistic and individualistic beliefs. That is, those who ended up with weak property rights and those who obtained full property rights developed very different beliefs about free markets. Along the same lines, people's beliefs are influenced by the political regime in which they live. Alesina and Fuchs-Schuendeln (2007) show that the difference in preferences

between former East and West Germans is mostly because of the direct influence of communism.

Following this research, we investigate the extent to which people's beliefs about the appropriateness of dishonesty are impacted by the quality of the judicial institutions to which they are exposed. For example, we investigate the extent to which people agree or disagree with such statements as *"If you want to make money, you can't always act honestly," "Citizens should not cheat on their taxes," It is wrong to sell someone something second-hand and conceal some or all of its faults," "It is wrong to make an exaggerated or false insurance claim."* The full list of the variables used in the analyses and their definitions are provided in Table 1.

As described in the empirical framework section in detail, we employ four different measures of institutional quality, and we consider these quality measures as endogenous. The endogeneity of institutional quality may arise for a number of reasons. For example, institutional quality can emerge as an equilibrium outcome, and it can be influenced by general attitudes towards dishonesty prevailing in the society. Alternatively, reverse causality from dishonest behavior to institutional quality cannot be ruled out. This can happen if more dishonest behavior and the ensuing overload of the criminal justice system impact the quality of the judicial decisions. Thus, we estimate the models by instrumental variables, utilizing the process through which judges and district attorneys are appointed to their posts as an instrument. There is variation across countries in this process. Judges and prosecutors can be appointed by the government with no prerequisites or no requirements other than a law degree and some work experience, or they can be appointed based on an exam in addition to the required work experience. In the former case, the government has

full control on who gets appointed as a judge or as a prosecutor, while in the latter case the government has much less influence. The manner in which the actors in the judicial system are appointed is expected to be related to the impartiality of the judiciary. If the government has the authority to appoint judges and prosecutors at will, those judges and prosecutors are more likely to be biased towards the government in comparison to the judges and prosecutors who are appointed to their positions following a written exam. On the other hand, the method of appointment is not expected to have a direct impact on people's propensity for dishonest behavior.

We show that there is a strong first-stage relationship: this procedural variation across countries, which is determined by law, or in some cases by the constitution of the country, is strongly related to the judicial independence, to the impartiality of the courts, to the protection of the property rights and well as to an index that combines these three measures.

We find that the quality of the judicial system has a significant impact on people's propensity to break the law in a number of domains such as making an exaggerated or false insurance claim, offering a bribe to a public official, falsely claiming government benefits, buying something knowing that might have been a stolen good, selling something second-hand by concealing its faults. We also find that low quality of the judicial system makes it more likely for people to consider a variety dishonest behavior as acceptable, suggesting that institutions help shape the beliefs of the society.

Section II presents the empirical framework. Section III describes the data set and the variables. Section IV presents the results, and Section V is the conclusion.

II. Empirical Framework

Consider Equation (1) below.

$$(1)\quad D_{ict} = \beta_0 + \beta_1 J_{ct} + \mathbf{X}_i\Phi + \mathbf{C}_c\boldsymbol{\Omega} + \delta_t + \varepsilon_{ict}$$

where D_{ict} is an indicator of dishonest behavior of person *i* who is a resident of country *c*, surveyed at time *t*. Alternatively, D_{ict} stands for indicators that represent individuals' dishonest attitudes, measured by their approval of dishonest behavior. The types of dishonest behavior we analyze in the paper could be classified as felony (major) crimes, or they could be misdemeanors (minor crimes), depending on the country in which the individual resides. For example, one of dishonesty indicators we employ is the response to the question "*In the last five years have you sold something second-hand and concealed some or all of its faults?*" This particular act could be punishable by law in some countries, but it may not be punishable in some others. Furthermore, depending on the priorities and resources of the judicial system, the police and prosecutors may decide not to press charges for this offense even if it is a criminal act in that country. Another indicator of dishonest behavior is whether the individual falsely claimed government benefits, such as social security payments. This act is a crime in most countries, although the severity of punishment may differ across countries. In summary, the first group of dependent variables include six dishonest and criminal behaviors which differ in their severity of criminality, ranging from offering a bribe to buying a stolen good.

The dependent variables in the second group gauge people's attitudes towards dishonesty. These variables measure individuals' feelings about the acceptability of some dishonest and illicit behaviors. For example, survey respondents are asked to evaluate

"how wrong it is" to sell a second-hand good and conceal its defects or to make a false insurance claim. They are also asked whether they agree or disagree with such statements as "a public official asking for bribe is wrong," "It is wrong for citizens to cheat on their taxes," and "if you want to make money you cannot always act honestly." The 12 variables that make up the set of dependent variables (D) in Equation (1) and their definitions are discussed in Section III.

Equation (1) includes personal attributes of the respondents such as age, sex, years of education, ethnic minority status, marital status, labor market activity, household income, location of residence, religiosity, and home ownership. These control variables, represented by vector **X** in Equation (1), are included to account for differences between individuals regarding their propensity to commit crime, stemming from the relative returns to crime and legal work (e.g. education, labor market activity, income). Other control variables, such as sex and religiosity, intend to capture the impact of personal attributes such as preferences and risk aversion.

The model cannot include country fixed effects because the indicators of judicial quality exhibits negligible within-country variation over the short time period analyzed. To account for country differences that may impact criminal proclivity and the tolerance for dishonesty, the model includes country attributes, represented by **C.** These variables also help absorb some of the deep impacts on our key explanatory variable, judicial quality, that may be driven by country attributes. For example, judicial quality may be systematically different between countries based on legal origins, the extent of their ethno-linguistic fragmentation, or the level of education. Thus, vector **C** includes such variables as per capita GDP, average country education, the size of the population, ethno-linguistics

fragmentation and individualism indexes of the country, legal origin of the country, and the proportion of government spending in national income.

The variable of interest, J_{ct}, which represents the quality of the judicial institutions in the country, is measured in different ways. This first measure, *Judicial Independence,* ranges from 0 to 10. It captures the extent to which the judiciary is independent from the influence of politics, the government, citizen or the firms. The second variable, *Impartial Courts*, also ranges from 0 to 10. It measures whether the legal framework of the country is not subject to manipulation and it is based on a clear and neutral process. Following previous work (Acemoglu et al. 2001, Knack and Keefer 1995), we employ *Protection of Property Rights* as the third measure of institutional quality. This variable provides a score that rages from zero to 10 for each country to indicate the extent to which citizens' property rights and assets are protected by law. Finally, we use principal component analysis to create an index of institutional quality based on the three quality measures described above.[7] δ_t represents fixed effects for survey years, and ε_{ict} is a white noise error term. Because cultural beliefs, preferences as well as attitudes towards crime and dishonesty may be correlated within regions in a country, we cluster the standard errors by country regions. Because we employ a number of different outcomes that aim to gauge

[7] Trial delays and the inefficiency of the courts in resolving cases can impact criminal propensity because such inefficiency may alter marginal criminal's perception of risk and deterrence (Dusek 2015, Pellegrina 2008). Such court delays, as an indicator of low judicial ineffectiveness, constitute one dimension of low judicial quality. However, in this paper we focus on low judicial quality as an institution, measured by such aspects as the lack of judicial independence, and lack of impartiality of the courts.

dishonest behavior and dishonest attitudes, we adjust the standard errors for multiple hypothesis testing (Newson 2010, Benjamini and Yekutieli 2001)

Our main interest is the coefficient β_1 in Equation (1). As described in Section 1, Estimation of Equation (1), however, is complicated because institutional quality, *J*, may be endogenous. For example, reverse causality from dishonest behavior to institutional quality cannot be ruled out. This can happen if more dishonest behavior and the ensuing overload of the criminal justice system impact the quality of the judicial decisions. To account for this potential effect, we control for the effectiveness of the courts in keeping up with the incoming caseload, measured by clearance rate for criminal cases in the country.

Institutional quality arguably evolves slowly, but it may be a function of the prevailing attitudes towards dishonesty. A tolerant cultural attitude in the country towards dishonesty would generate a higher propensity for dishonest acts, and it can also lead to poor institutional quality. Put differently, a "culture of dishonesty" can have an impact on both institutional quality and individual criminal propensity. To get around this potential confounding, we estimate Equation (1) with instrumental variables as shown in Equation (2) below.

(2) $J_{ct} = \alpha_0 + \alpha_1 L_c + \mathbf{X}_i\Psi + \mathbf{C}_c \boldsymbol{\Gamma} + \mu_t + \xi_{ict}$

where the quality of the judicial institutions, *J*, is instrumented with the appointment procedures of judges and prosecutors in the country, represented by *L*. Although most countries require some prior experience as a legal professional before being appointed as a judge or prosecutor, in some countries judges and prosecutors are appointed by the government without taking a competitive exam. In other countries, judges or prosecutors

qualify for their posts based on a formal written exam. This means that in some countries the government has complete control over who gets appointed and who does not without relying on exam scores, but in other countries the appointments to these positions are arguably more objective and merit-based. As explained in the data section, we classify countries into three groups based on procedural differences in how judges and prosecutors are appointed. The country-specific guidelines and procedures of these appointments are based on law, and in some countries they are written in the constitution. Assuming that the procedures used to appoint judges and prosecutors have no direct influence on people's criminal proclivity or on their beliefs, appointment procedure of judges/prosecutors is a valid instrument.

III. Data and Descriptive Statistics

The data are obtained from a variety of sources. The main data source is Economic Morality Module and the Justice Module of the European Social Survey in Rounds 2 and 5, conducted between 2004-2006, and 2010-2011. There are 25 countries surveyed.[8] Depending on the outcome variable, sample sizes range from 25,314 to 54,034. Table 1 displays the definitions and the descriptive statistics of the dependent variables. The variables in Panel A are dichotomous indicators that take the value of 1 if the survey respondent indicated that he/she has engaged in the behavior listed during the last five years (1-Misusing or altering a document, 2-Falsely claiming government benefits, 3-Offering a bribe, 4-Conceiling the faults of a second-hand product when selling, 5-Buying

[8] The countries in the data set are: Austria, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Italy, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland and Turkey.

stolen goods, 6-Filing false or exaggerated insurance claims). Only 2.7 percent of the individuals indicated that they misused or altered a card or a document to pretend to be eligible for something they were not eligible. Similarly, only 1.6 percent indicated that they falsely claimed government benefits such as social security, when they were not entitled to. The highest rate pertains to buying something that might have been a stolen good. Six-and-a half percent of the respondents indicated that they engaged in this behavior. These relatively low rates, however, disguise a rather significant between-country variation. Panel A of Table 2 displays country averages for dishonest behaviors in selected countries. While the proportion of respondents who indicated that they misused or altered a document is 0.7 percent in Hungary, the rates are 2.3 percent in Switzerland, 4.3 percent in Spain and 5.8 percent in Czech Republic and Austria. Similar variation exists between countries regarding the intensity of other dishonest behavior. For example, the proportion of individuals who offered a bribe is only 0.2 percent in Iceland, while it is 2.8 percent in Estonia, 5.3 percent in Poland, and 8.5 percent in Slovakia.

The bottom part of Panel A in Table 2 presents the country averages of the remaining three dishonest behavior in selected countries, and shows significant variation between countries. For example, while only 1.1 percent of Hungarians conceal the defects of the second-hand goods they sell, the rate is 4.6 percent in the Netherlands, and 5.3 percent in Finland. Only 1.5 percent of people in Lithuania indicate that they made a false insurance claim, but the rate is 2.7 percent in Italy, and 7.2 percent in Austria.

It is clear that some of these differences could be the result of country attributes, such as the level of economic development. For example, individuals who live in developed countries with mature financial and insurance markets have more opportunities

to interact with insurers, which increases the possibility to file an insurance claim. Similarly, for those who live in countries where the government is more engaged in the economy, the frequency of interaction with a government agency and the opportunity to claim a government benefit (accurately or falsely) is higher. To account for such country differences, we control for a number of country attributes, as displayed in Table 3 below.

To assess whether the responses reported by the individuals in our data are similar to other available information, we compared country-specific bribery rates that can be calculated using the individuals in our data to outside sources. There is a high degree of consistency between the extent of bribery revealed by the respondents in our data (their own bribery activity) and corruption perception indexes of other sources, such as Transparency International (TI). For example, as shown in the top panel of Table 2, only 0.2 percent of Icelandic and Finnish people report having paid a bribe during the last five years. The Corruption Perception index values assigned to these countries by Transparency International (from 1 to 10; 10 signifying lowest corruption) are 8.5 and 9.2, respectively. Based on our data, the rate of bribery in Norway is 0.7 percent, and 5.3 percent of the Polish people paid a bribe during the last five years. The Transparency International corruption perception index for these countries is 8.6 for the former, and 5.3 for the latter. As Table 2 shows, the bribery rates are 9.3 percent in the Czech Republic and 8.5 percent in Slovakia. Their TI index values are 4.6 and 4.3, respectively. More generally, the correlation between the country-specific bribery-giving rates obtained from our data and the corruption perception index of the TI is -0.65, indicating reasonably strong correlation.

The lower panel of Table 1 presents the definitions and the descriptive statistics of the variables that measure the attitudes toward dishonesty. For example, the variable "*Cannot always act honestly if you want to make money*" takes the value of one if the individual strongly agrees, agrees, or remains neutral when presented with the statement that "If you want to make money, you can't always act honestly." Although Table 1 shows that about 51 percent of the respondents agree with this statement, Panel B of Table 2 shows that there is significant variation between countries. For example, while about 32 percent of Portuguese believe that one cannot always act honestly if one wants to make money, 49 percent of the French and almost 70 percent of Italians think that this statement is true.

The dichotomous variable "*Cheating on taxes is not wrong*" takes the value of one if the respondent does not disagree or does not strongly disagree with the statement that "Citizens should not cheat on their taxes," and zero otherwise. More than 17 percent of the sample thinks that cheating on taxes is acceptable. Table 2 shows that 6 percent of Turks believe tax evasion is okay, while the rate is 12 percent in Poland, 18 percent in Denmark and 25 percent in Germany.

Table 1 displays that 3.5 percent of the sample believe that bribery is not wrong. This variable takes the value of one if the respondents indicated that "a public official asking someone for a favor or bribe in return for their services" is not wrong at all, or a bit wrong. Other variables, that gauge the extent to which people find various other dishonest behavior acceptable, are measured similarly. These variables indicate whether the individual believes that "Concealing the faults of a second-hand product is not wrong," "Buying a possibly stolen good is not wrong," and "Making a false insurance claim" is not

wrong. Table 2 shows that countries differ substantially in the propensity of their citizens' agreement with these responses. For example, while less than 4 percent of the respondents in Norway think that making a false or exaggerated insurance claim is acceptable behavior, the rate is about 13 percent in Italy, 23 percent in France and 40 percent in Russia.

The top panel of Table 3 displays the descriptive statistics of personal attributes of the respondents and the middle panel presents the descriptive statistics of country characteristics. The bottom section of Table 3 shows the definitions and the descriptive statistics of the indicators of judicial quality. The sample mean of Judicial Independence is about 7, but there is significant variation between countries. For example, the value of Judicial Independence is 2.7 in Russia, 3.2 in Bulgaria, 4.7 in Italy, 5.5 in Turkey, 6.3 in Portugal, 7.9 in Luxembourg and 9.0 in Denmark. The same variation exist in other measures of judicial quality. For example, the value of *Impartial Courts* is 2.8 in Croatia, 2.9 in Russia, 3.3 in Italy, 4.4 in Hungary, 6.6 in France, 7.5 in Germany, 8.0 in Sweden, and 8.6 in Austria.

The bottom section of Table 3 also displays information about the instrument: Judge and Prosecutor Appointment, which is an index that classifies countries into three groups. The value of the index is 0 if the appointment procedure *does not* use a combination of exam and experience to appoint *either* judges or prosecutors. This group of countries include Austria, Bulgaria, Croatia, Cyprus, Czech Rep., Denmark, Finland, France, Greece, Iceland, Ireland, Italy, Luxembourg, Portugal, Spain, Switzerland, and Ukraine.

The index takes the value of 1 if the appointment procedure uses a competitive exam to appoint *either* judges or prosecutors, and the index is equal to 2 if the

appointment procedure uses a competitive exam to appoint *both* judges and prosecutors. Countries with index value of 1 are Estonia, Hungary, Norway, Russia, Slovak Republic and Sweden. Countries with index value of 2 include Germany, Lithuania, the Netherlands, Poland, Slovenia, and Turkey. In this last group of countries both judges and prosecutors have to take an exam to qualify for their posts. The source of this information is the European Commission for the Efficiency of Justice (CEPEJ) 2014 Reports.

IV. Results

Table 4 presents instrumental variable results for all 12 regressions. Panel A contains the results of six regressions where the dependent variables represent various dishonest and criminal behavior. In the regressions reported in this table the quality of judicial institutions is measured by *Judicial Independence*. In the interest of space, we only report the coefficients of the judicial quality measures.[9] The table contains two sets of p-values. Those that are in (parentheses) are based on clustering at the region (NUTS1 or NUTS2) level. Because we use as outcomes multiple variables that gauge similar aspects of dishonest behavior and attitudes, we adjusted the p-values for multiple hypothesis testing (Newson 2010). The adjusted p-values are reported in [brackets].

The results in Panel A of Table 4 reveal that an improvement in judicial independence has no impact on the propensity to conceal the faults of a second-hand product when selling it. On the other hand, an improvement in judicial independence reduces the proclivity to misuse or alter a document. It also reduces the propensity to falsely claim a government benefit, to offer a bribe, to buy stolen goods and to make an

[9] Full set of results are available upon request.

exaggerated or false insurance claim. The results imply that if judicial independence of the courts improved by one unit (e.g. an improvement from the level of Lithuania to Poland {an increase of the index from 4 to 5}, or from the level of Turkey to about the level of France {from 5.5 to 6.7}) this would lower the propensity to engage in these acts by 2-to-3 three percentage points.

Panel B of Table 4 displays the instrumental variables results related to dishonest attitudes. The dependent variables in this group measure people's beliefs in *the approval of dishonest behavior*. For example, the outcome in cell (1) is an indicator that identifies if the respondent indicated that "if you want to make money, you can't always act honestly." Other outcomes in this group include the *approval* of such acts as cheating on taxes, bribing a government official, concealing the faults of a product when selling, buying a stolen good, and making a false insurance claim. Panel B shows that an increase in institutional quality, measured by judicial independence, mitigates these attitudes. In other words, an improvement in judicial independence makes individuals less likely to declare that dishonest acts are acceptable. For example, an improvement in the judicial quality from the level of Hungary to the level of France lowers the propensity to believe that "*you cannot always act honestly if you want to make money*" by 10 percentage points, or by 20 percent from the baseline. The same improvement in judicial quality lowers the propensity to declare that "cheating on taxes is not wrong" by 32 percent.

Table 5 presents the results of the same regressions with one difference: judicial quality is measured by the variable *Impartial Courts*. The inference is not altered. An increase in the quality of judicial institutions, measured by the extent to which courts are impartial and not subject to manipulation, lowers both propensity to engage in criminal

acts (the top panel of Table 5), and it also lowers the propensity to find dishonesty acceptable (the bottom panel of Table 5).

We repeat the same analysis, but use the protection of property rights as the measure of institutional quality. The results, reported in Appendix Table A1, are similar to those reported in Tables 4 and 5. Using the three measures of institutional quality employed in the regressions so far (Judicial independence, Impartial Courts, Protection of Property Rights), we obtained their principal component, which is then employed as a summary measure of institutional quality. The results of the instrumental variables regressions that use the principal component, reported in Appendix Table A2), are consistent with previous results.[10] In summary, the results reveal that the quality of judicial institutions has a deterrent effect on dishonest and criminal acts, and it also reduces people's propensity to have dishonest attitudes.

Appendix Tables A3-A6 display the OLS counterparts of the instrumental variables regressions reported in Tables 4, 5, A1 and A2. The signs and the statistical significance of the coefficients are consistent between the OLS and IV specification with a couple of exceptions. The magnitudes of the OLS estimates, however, are generally smaller than the IV estimates.[11]

[10] The correlations between the four measures of institutional quality are very high, ranging from 0.93 to 0.98.

[11] Consistent with the IV results and the strong first stage, the reduced form results, displayed in Appendix Table A7, show that the appointment procedure of judges and prosecutors are significant determinants of the proclivity of illicit behavior and the propensity to approve of dishonest acts.

V. Extensions

Although we cannot identify the exact mechanism through which the quality of judicial institutions influence the propensity for dishonest actions and the tendency to approve of dishonest acts, an obvious pathway, as described in the introduction, could be the relationship between perceived certainty of sanctions and the quality of judicial institutions. More specifically, a decay in the quality of institutions is expected to reduce the perceived certainty of punishment if a deterioration in judicial quality leads to inefficiency and uncertainty in the criminal justice system.

In the ESS data the survey respondents are asked "How successful do you think police are at preventing crimes in your country?" Options given ranged from 0 (extremely unsuccessful) to 10 (extremely successful). Calculating the proportion of individuals (weighted by survey weights) in each country who answered these questions as " Successful" (choosing a rating of 6 or higher) shows that people's beliefs about crime prevention is positively correlated with actual judicial quality of the country, as depicted by Figures 1A and 1B.[12]

Although we demonstrate that judicial quality of the country has an impact on people's propensity for dishonest behavior and on their dishonest attitudes, it can be argued that the indicators of judicial quality may capture (or represent) cultural/moral/ethical dimensions of the society. More specifically, cultural norms and beliefs, which have an impact on individuals' behaviors and attitudes, could also influence the level of judicial quality in the country. Under this scenario, judicial quality would be

[12] The scatterplot of police effectiveness and other indicators of judicial quality used in the paper (Protection of property rights and the principal component) exhibited the same pattern as shown in Figures 1A and 1B.

related to society's general attitudes towards such concepts as fairness, equal opportunity, trust, income/wealth, and family values. To test this conjecture we chose questions from the ESS that were posed to the respondents to gauge their attitudes towards wealth, their beliefs in whether people try to take advantage of them (being suspicious of others), attitudes towards equality, and the belief in family being the main priority in life. Specifically, we used the question in which the survey respondents were asked: "*How much is the person in this description like you? It is important for him/her to be rich. He/she wants to have a lot of money and expensive things"* Possible responses range from 1 (very much like me) to 6 (not like me at all). We created a dummy variable that takes the value of 1 if the responded chose a value of 1 to 4 for this question, and zero otherwise, to represent the belief that it is important to be rich. Similarly, we used the question: "*How much is the person in this description like you? He/she thinks it is important that every person in the world be treated equally. She/he believes everyone should have equal opportunities in life"* to create a dichotomous indictor to represent the survey respondent's belief in equal treatment of others.

We also employed the question: *"Do you think most people would try to take advantage of you if they got the chance, or would they try to be fair?"* to create a dummy variable to indicate the belief that most people wouldn't try to advantage of others.[13] Finally, we used people's responses to the statement: "*A person's family ought to be his or her main priority in life*," and coded as 1 those responses that indicated agreement or strong agreement with the statement.

[13] Possible answers ranged from 0 (most people would try to take advantage of me) to 10 (most people would try to be fair). A dichotomous indicator is created which takes the value of 1 if the respondent chose a value of 5 or higher to answer this question.

Employing the same instrumental variables models used in the paper (Equations 1 and 2) and using these four dummy variables as outcomes, we found that indicators of institutional quality have no statistically significant impact on these beliefs. The results, displayed in Table 6 show that institutional quality, driven by the manner with which judges and prosecutors are appointed, has no impact on these beliefs. These results demonstrate that although judicial quality has an influence on the proclivity of illicit behavior and that it impacts dishonest attitudes, judicial quality does not impact other beliefs such as the importance of the family, believing in the fairness of people, believing in fair treatment of others, and the importance of being rich.

VI. Summary and Conclusion

Institutions have an impact on economic interactions between agents, and they are strongly related to economic performance of countries (Acemoglu and Robinson 2001), Knack and Keefer 1995, North 1991, 1981), and there exist a number of pathways through which institutional quality can interact with government policy and impact economic development (Acemoglu and Johnson 2005, Rodrik et al. 2004, Hall and Jones 1999).[14] Judicial system is an important component of the body of institutions in a country, and North (1990) underlines the importance of the judicial system in the enforcement of contracts to facilitate transactions to foster economic activity.

Institutions can also alter individual behavior to the extent that behavior responds to the landscape of incentives, some of which are determined by institutions. For example, judicial system's lack of independence and courts' lack of impartiality may provide a

[14] See Glaeser et al. (2004) on the difficulties in establishing a causal link from institutions to economic development.

signal to the citizens about the ambiguity of judicial decisions. This may, in turn, lead to an increased propensity to disregard the rule of law. Furthermore, increased and wide-speared disregard of the rule of law and the ensuing illicit behavior may modify the social norms in the society regarding the acceptability of unlawful and dishonest behavior.

In this paper we use micro data on residents of 25 European countries and employ alternative measure of judicial quality (e.g. judicial independence, or the impartiality of the courts) to investigate the extent to which the quality of judicial institutions has an impact on individuals' propensity for criminal and dishonest behavior and on their views regarding the acceptability of such behavior. Acknowledging that the quality of judicial institutions is endogenous, we employ as an instrument the procedures used in each country with which prosecutors and judges are appointed to their posts. The manner in which judges and prosecutors are appointed is expected to be related to the impartiality of the judiciary. If the government has the authority to appoint judges and prosecutors at will, they are more likely to be biased towards the government and towards those whose interests are aligned with the government in comparison to judges and prosecutors who are appointed to their positions following a written exam. Using the variation between countries in appointment procedures, we show that these procedures, that are determined by law or by the constitution of country, are strongly related to judicial independence, indicating a strong first-stage relationship. Yet, the method of appointment is not expected to have a direct impact on people's propensity for dishonest behavior or on their tendency to find dishonesty acceptable.

Empirical analyses show that the quality of the judicial institutions has a significant impact on people's propensity to break the law and on their propensity to declare dishonest

behavior acceptable. An improvement in the quality of judicial institutions, related to the variation in the manner judges and prosecutors are appointed to their posts, reduces people's propensity to falsely claim a government benefit, to offer a bribe, to buy stolen goods, to misuse or alter a document, and to make an exaggerated or false insurance claim. In addition, we find that judicial quality alters people's beliefs about the acceptability of dishonesty and illegal behavior. An improvement in judicial quality reduces people's tendency to agree with the statement that "You cannot always act honestly if you want to make money." It also makes it less likely to find acceptable such acts as buying stolen goods, concealing the faults of a good when selling it, making an exaggerated insurance claim, cheating on taxes, and bribery.

Low judicial quality could be symptom of underlying cultural norms and beliefs. In other words, judicial quality could be related to general attitudes in the society towards concepts and beliefs such as fairness, equal opportunity, importance of income/wealth, and so on. Using additional questions from the same survey, however, we find that judicial quality does not impact other beliefs such as the importance of the family, believing in the fairness of people, believing in fair treatment of others, and the importance of being rich.

In summary, the results reveal that the quality of judicial institutions has a deterrent effect on dishonest and criminal acts, and it also reduces the propensity to have dishonest attitudes, indicating that institutions help shape the beliefs of the society.

Table 1
Descriptive Statistics of Crimes, Misdemeanors and Dishonest Attitudes

Variable	Description	Mean (Std. Dev.)
Misused or altered a document	Equals 1 if in the last 5 years the respondent misused or altered a card or document to pretend to be eligible for something he or she was not, 0 otherwise	0.027 (0.161)
Falsely claimed government benefits	Equals 1 if in the last 5 years the respondent over-claimed or falsely claimed government benefits such as social security or other benefits, 0 otherwise	0.016 (0.124)
Offered a bribe	Equals 1 if in the last 5 years the respondent offered a favor or a bribe to a public official in return for their services, 0 otherwise	0.019 (0.136)
Concealed faults of a second-hand product	Equals 1 if in the last 5 years the respondent sold something second-hand and concealed some or all of its faults, 0 otherwise	0.034 (0.182)
Bought possibly stolen goods	Equals 1 if in the last 5 years the respondent bought something he or she thought might be stolen, 0 otherwise	0.065 (0.246)
Exaggerated an insurance claim	Equals 1 if in the last 5 years the respondent made an exaggerated or false insurance claim, 0 otherwise	0.027 (0.163)
Cannot always act honestly if you want to make money	Equals 1 if the respondent replied "Agree strongly", "Agree" or "Neither Agree nor Disagree" with the statement *"If you want to make money, you can't always act honestly."*, 0 otherwise	0.508 (0.500)
Cheating on taxes is not wrong	Equals 1 if the respondent replied "Disagree strongly", "Disagree" or "Neither Agree nor Disagree" with the statement *"Citizens should not cheat on their taxes."*, 0 otherwise	0.176 (0.381)
Bribery is not wrong	Equals 1 if the respondent replied "Not wrong at all" or "A bit wrong" for the question *"How wrong is a public official asking someone for a favor or bribe in return for their services?"*, 0 otherwise	0.035 (0.183)
Concealing faults of a second-hand product is not wrong	Equals 1 if the respondent replied "Not wrong at all" or "A bit wrong" for the question *"How wrong is someone selling something second-hand and concealing some or all of its faults?"*, 0 otherwise	0.062 (0.241)
Buying possibly stolen goods is not wrong	Equals 1 if the respondent replied "Not wrong at all" or "A bit wrong" for the question *"How wrong is it to buy something you thought might be stolen?"*, 0 otherwise	0.140 (0.348)
Exaggerating an insurance claim is not wrong	Equals 1 if the respondent replied "Not wrong at all" or "A bit wrong" for the question *"How wrong is it to make an exaggerated or false insurance claim?"*, 0 otherwise	0.124 (0.329)

Note: Number of observations ranges from 25,314 to 54,043

Table 2
Country Averages of Crimes, Misdemeanors and Dishonest Attitudes

A: Crimes and Misdemeanors					
Misused or altered a document		Falsely claimed government benefits		Offered a bribe	
Hungary	0.7%	Netherlands	0.1%	Iceland	0.2%
Sweden	1.7%	Hungary	0.1%	Finland	0.2%
Finland	2.2%	Turkey	1.1%	Norway	0.7%
Switzerland	2.3%	Germany	1.5%	Hungary	1.6%
Estonia	3.4%	Norway	1.8%	Estonia	2.8%
Spain	4.3%	Iceland	2.6%	Poland	5.3%
Czech Republic	5.8%	Austria	3.3%	Czech Republic	9.3%
Austria	5.8%	Czech Republic	4.2%	Slovakia	8.5%
Average	2.7%	Average	1.6%	Average	2.4%
Concealed faults of a second-hand product		Bought possibly stolen goods		Exaggerated an insurance claim	
Hungary	1.1%	Portugal	1.8%	Turkey	0.5%
Portugal	1.9%	Slovenia	2.9%	Slovenia	1.1%
Luxemburg	2.0%	Switzerland	3.6%	Lithuania	1.5%
Norway	2.2%	Poland	4.5%	Luxembourg	2.5%
Italy	3.9%	Bulgaria	4.7%	Italy	2.7%
Netherlands	4.6%	Spain	7.5%	Czech Republic	5.2%
Finland	5.3%	Slovakia	12.5%	Iceland	6.0%
Estonia	5.7%	Czech Republic	15.0%	Austria	7.2%
Average	3.3%	Average	6.0%	Average	2.4%

B: Dishonest Attitudes					
Cannot always act honestly if you want to make money		Cheating on taxes is not wrong		Bribery is not wrong	
Portugal	31.7%	Turkey	5.9%	Iceland	0.9%
Sweden	42.4%	Estonia	9.2%	Denmark	1.8%
France	49.3%	Poland	12.0%	Germany	2.1%
Czech Republic	54.2%	Hungary	13.8%	Netherlands	2.4%
Turkey	58.7%	Spain	15.8%	Poland	3.9%
Estonia	58.9%	Denmark	17.8%	Slovenia	4.7%
Hungary	65.5%	Sweden	21.7%	Austria	4.8%
Italy	69.5%	Germany	25.2%	Spain	6.4%
Average	54.1%	Average	19.7%	Average	4.0%
Concealing faults of a second-hand product is not wrong		Buying possibly stolen goods is not wrong		Exaggerating an insurance claim is not wrong	
Iceland	1.1%	Denmark	3.3%	Turkey	1.6%
Norway	2.7%	Sweden	5.4%	Norway	3.8%
Luxembourg	3.4%	Netherlands	12.0%	Portugal	7.7%
Estonia	5.7%	Croatia	15.4%	Italy	12.6%
Netherlands	6.2%	Bulgaria	17.8%	Poland	15.0%
Germany	7.0%	Slovakia	21.2%	Germany	16.8%
Spain	8.5%	France	22.3%	France	22.8%
Austria	12.5%	Russia	30.1%	Russia	40.4%
Average	6.7%	Average	13.2%	Average	11.7%

The entries are country averages that are obtained from the ESS surveys round 2 and round 5.

Table 3
Descriptive Statistics of Personal Attributes and Country Characteristics

Variable	Description	Mean (Std. Dev.)
Personal characteristics		
Age	Age of the respondent	45.966 (17.344)
Male	Equal to 1 if the respondent is male, 0 otherwise	0.483 (0.500)
Ethnic minority	Equal to 1 if the respondent belongs to minority ethnic group in country, 0 otherwise	0.042 (0.201)
Years of schooling	Number of years of full-time education completed	11.789 (4.033)
Working	Equal to 1 if the respondent is working, 0 otherwise	0.530 (0.500)
Married	Equal to 1 if the respondent is married, 0 otherwise	0.573 (0.495)
Born in the country	Equal to 1 if the respondent was born in the country, 0 otherwise	0.921 (0.269)
City	Equal to 1 if the respondent lives in a big city, 0 otherwise	0.201 (0.400)
Suburb	Equal to 1 if the respondent lives in a suburb or an outskirt of a big city, 0 otherwise	0.117 (0.322)
1st Quintile of household income	Equal to 1 if the respondent is in the 1st quintile of country-specific household income distribution, 0 otherwise	0.127 (0.332)
2nd Quintile of household income	Equal to 1 if the respondent is in the 2nd quintile of country-specific household income distribution, 0 otherwise	0.182 (0.386)
3nd Quintile of household income	Equal to 1 if the respondent is in the 3nd quintile of country-specific household income distribution, 0 otherwise	0. 136 (0.343)
4nd Quintile of household income	Equal to 1 if the respondent is in the 4nd quintile of country-specific household income distribution, 0 otherwise	0.227 (0.419)
5nd Quintile of household income	Equal to 1 if the respondent is in the 5nd quintile of country-specific household income distribution, 0 otherwise	0.329 (0.470)
Low religiosity	Equal to 1 if the respondent reports his or her religiosity below 4 on a scale from 0 to 10, 0 otherwise	0.352 (0.478)
Medium religiosity	Equal to 1 if the respondent reports his or her religiosity 4, 5, or 6 on a scale from 0 to 10, 0 otherwise	0.342 (0.474)
High religiosity	Equal to 1 if the respondent reports his or her religiosity above 6 on a scale from 0 to 10, 0 otherwise	0.306 (0.461)
Own dwelling	Equal to 1 if the dwelling is owned by any household member, 0 otherwise	0.725 (0.447)
# Rooms	Number of rooms the household has use of (not kitchens/bathrooms/toilets)	3.926 (1.681)
Country characteristics		
Clearance rate*	The number of all resolved criminal cases divided by the number of incoming criminal cases in the country.	0.918 (0.234)
GDP per capita+	PPP-adjusted GDP per capita in constant 2011 US$	36,851 (15,246)
Education#	Average educational attainment in the country for population 15 and over.	10.589 (1.452)

	(Table 3 concluded)	
Individualism[++]	Hofstede Individualism Index	61.738 (13.848)
Ethno-linguistic fragmentation[⁋]	Roeder's 1985 Index of Ethno-Linguistic Fragmentation	0.209 (0.170)
Democratic years[#]	Number of democratic years from 1930 to 1995	40.607 (26.374)
Population[+]	Country population in millions	22.875 (26.649)
Government consumption[†]	Government share of real GDP per capita in current PPPs	0.188 (0.051)
French legal origin[‡]	Equal to 1 if the legal origin is French commercial code, 0 otherwise	0.298 (0.457)
Socialist/communist legal origin[‡]	Equal to 1 if the legal origin is socialist/communist, 0 otherwise	0.251 (0.434)
German legal origin[‡]	Equal to 1 if the legal origin is German commercial code, 0 otherwise	0.182 (0.386)
Scandinavian legal origin[‡]	Equal to 1 if the legal origin is Scandinavian commercial code, 0 otherwise	0.269 (0.443)
Institutions		
Judicial independence[Ɔ]	Index on the scale of 0 to 10. *"Is the judiciary in the country independent from political influences of members of government, citizens, or firms?"*	6.990 (1.611)
Impartial courts[Ɔ]	Index on the scale of 0 to 10. *"Is the legal framework in the country for private businesses to settle disputes and challenge the legality of government actions and/or regulations inefficient and subject to manipulation or is it efficient and follows a clear, neutral process?"*	6.730 (1.749)
Protection of property rights[Ɔ]	Index on the scale of 0 to 10. *"Property rights, including over financial assets, are poorly defined and not protected by law (= 1) or are clearly defined and well protected by law (= 7)."*	7.261 (1.484)
Principal component	The first principal component of the three measures of quality of judicial institutions.	1.639 (1.339)
Judge & prosecutor appointment procedure[*]	Equal to 0 if there is no exam to appoint either the judges or the prosecutors. Equal to 1 if there is a competitive exam for either judges or prosecutors. Equal to 2 if there is a competitive exam for both judges or prosecutors.	0.787 (0.842)

*: The Council of Europe, Division of Human Rights and Rule of Law, the European Commission for the Efficiency of Justice. https://www.coe.int/t/dghl/cooperation/cepej/evaluation/archives_en.asp
+: The World Bank, World Development Indicators data base. https://data.worldbank.org/data-catalog/world-development-indicators
#: Barro-Lee data set. www.Barrolee.com
⁋: Roeder's 1985 index of the extent of ethnolinguistic fragmentation in the country. http://pages.ucsd.edu/~proeder/elf.htm
++: Hofstede, Cultural Dimensions. http://geert-hofstede.com/countties.html.
†: Penn World Tables.
‡: Teorell, Jan, Nicholas Charron, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Petrus Sundin & Richard Svensson, 2013. "The Quality of Government Dataset" version qog_std_cs_20dec13 http://www.qog.pol.gu.se
Ɔ: Cato Institute, "Economic Freedom of the World" based on Global Competitiveness Reports, World Economic Forum. Reports.weforum.org.

Table 4
The Impact of Judicial Independence on Crimes, Misdemeanors and Dishonest Attitudes (IV Results)

A: The Impact of Judicial Independence on Crimes and Misdemeanors			
	(1)	(2)	(3)
	==1 if in the last 5 years the respondent at least once…		
	…Misused or altered a document	…Falsely Claimed Government Benefits	…Offered a bribe
Judicial independence	-0.025***	-0.024***	-0.028***
	(0.028)	(0.006)	(0.022)
	[0.031]	[0.012]	[0.026]
N	25,770	25,801	25,825
First stage (F-stat.)	18.32	18.74	18.84
	(4)	(5)	(6)
	==1 if in the last 5 years the respondent at least once…		
	…Concealed faults when selling a second-hand product	…Bought possibly stolen goods	…Exaggerated an insurance claim
Judicial independence	-0.000	-0.020***	-0.024***
	(0.994)	(0.001)	(0.000)
	[0.994]	[0.002]	[0.000]
N	25,314	26,623	52,655
First stage (F-stat.)	18.26	369.5	55.85
B: The Impact of Judicial Independence on Dishonest Attitudes			
	(1)	(2)	(3)
	Cannot always act honestly if you want to make money	Cheating on taxes is not wrong	Bribery is not wrong
Judicial independence	-0.071***	-0.038***	-0.034***
	(0.008)	(0.013)	(0.001)
	[0.012]	[0.017]	[0.002]
N	27,165	27,332	27,365
First stage (F-stat.)	18.43	18.15	18.19
	(4)	(5)	(6)
	Concealing faults of a second-hand product is not wrong	Buying possibly stolen goods is not wrong	Exaggerating an insurance claim is not wrong
Judicial independence	-0.030***	-0.063***	-0.060***
	(0.007)	(0.000)	(0.000)
	[0.012]	[0.000]	[0.000]
N	27,417	26,818	54,043
First stage (F-stat.)	17.99	367.5	55.74

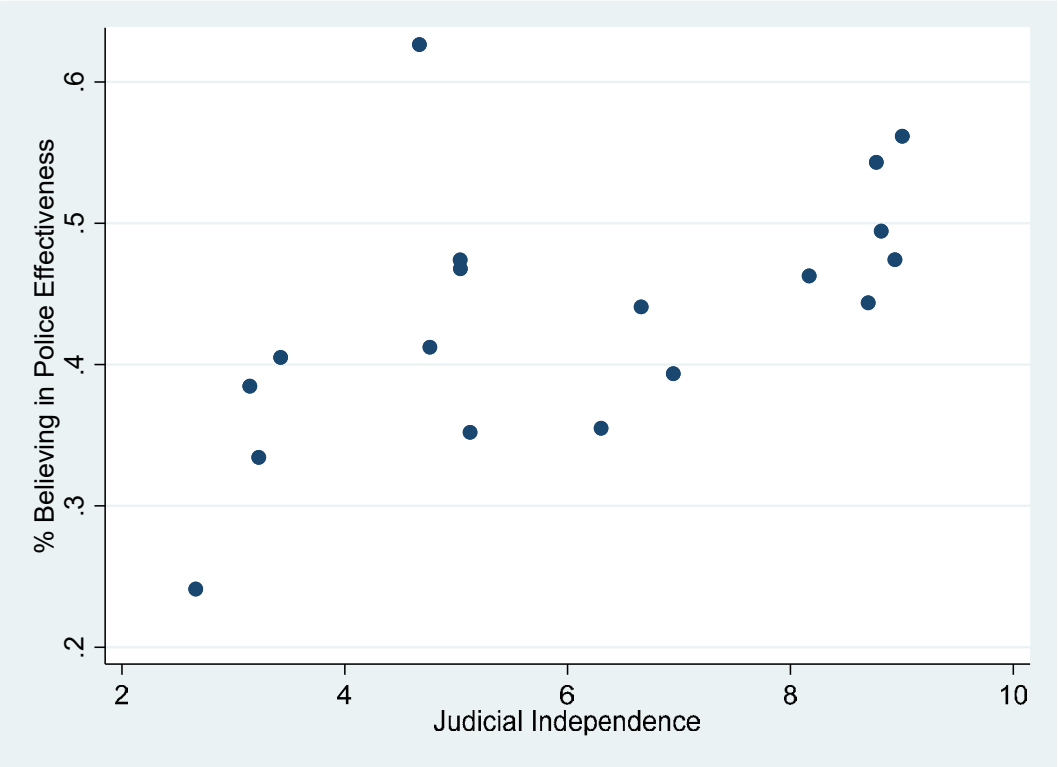
Standard errors are clustered at the region level (NUTS1 or NUTS2).The p-values are reported in (parentheses). The p-values adjusted for multiple hypothesis testing are reported in [brackets]. *: significant at 10 percent level, **: significant at 5 percent level and ***: significant at 1 percent level.

Table 5
The Impact of Impartial Courts on Crimes, Misdemeanors and Dishonest Attitudes
(IV Results)

A: The Impact of Impartial Courts on Crimes and Misdemeanors			
	(1)	(2)	(3)
	==1 if in the last 5 years the respondent at least once…		
	…Misused or altered a document	…Falsely Claimed Government Benefits	…Offered a bribe
Impartial courts	-0.020***	-0.019***	-0.023***
	(0.010)	(0.001)	(0.009)
	[0.109]	[0.002]	[0.108]
N	25,770	25,801	25,825
First stage (F-stat.)	59.63	60.42	60.56
	(4)	(5)	(6)
	==1 if in the last 5 years the respondent at least once…		
	…Concealed faults when selling a second-hand product	…Bought possibly stolen goods	…Exaggerated an insurance claim
Impartial courts	-0.000	-0.030***	-0.027***
	(0.994)	(0.001)	(0.000)
	[0.994]	[0.002]	[0.000]
N	25,314	26,623	52,656
First stage (F-stat.)	59.36	598.5	125.0
B: The Impact of Impartial Courts on Dishonest Attitudes			
	(1)	(2)	(3)
	Cannot always act honestly if you want to make money	Cheating on taxes is not wrong	Bribery is not wrong
Impartial courts	-0.058***	-0.031***	-0.028***
	(0.002)	(0.006)	(0.000)
	[0.003]	[0.008]	[0.000]
N	27,165	27,332	27,365
First stage (F-stat.)	58.58	57.62	58.00
	(4)	(5)	(6)
	Concealing faults of a second-hand product is not wrong	Buying possibly stolen goods is not wrong	Exaggerating an insurance claim is not wrong
Impartial courts	-0.024***	-0.093***	-0.069***
	(0.004)	(0.000)	(0.000)
	[0.006]	[0.000]	[0.000]
N	27,417	26,818	54,043
First stage (F-stat.)	57.51	589.4	121.2

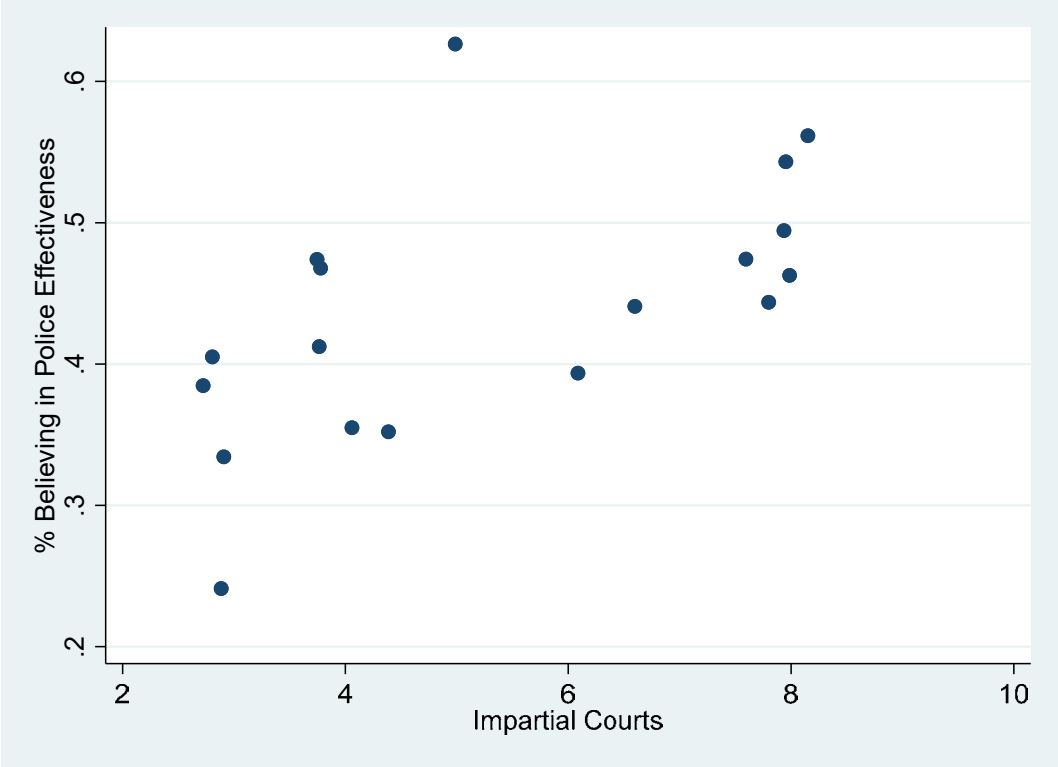
Standard errors are clustered at the region level (NUTS1 or NUTS2).The p-values are reported in (parentheses). The p-values adjusted for multiple hypothesis testing are reported in [brackets]. *: significant at 10 percent level, **: significant at 5 percent level and ***: significant at 1 percent level.

Figure 1
Country-Level Relationship between Judicial Independence and People's Believes in Police Effectiveness



Judicial Independence: Country indicator. Range: 0 to 10. Least independent from political influence, government or firms = 0; Most independent = 10. % Believing in Police Effectiveness: The percentage of survey respondents in a country who indicated that the police are successful in preventing crime where violence is used or threatened in their country. Source: ESS

Figure 2
Country-Level Relationship between Impartial Courts and People's Believes in Police Effectiveness



Impartial Courts: Country indicator. Range: 0 to 10. Least efficient legal framework to settle disputes and challenge the legality of government actions and/or regulations = 0; Most efficient = 10. % Believing in Police Effectiveness: The percentage of survey respondents in a country who indicated that the police are successful in preventing crime where violence is used or threatened in their country. Source: ESS

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APPENDIX

Table A1
The Impact of Protection of Property Rights on Crimes, Misdemeanors and Dishonest Attitudes (IV Results)

A: The Impact of Protection of Property Rights on Crimes and Misdemeanors			
	(1)	(2)	(3)
	==1 if in the last 5 years the respondent at least once…		
	…Misused or altered a document	…Falsely Claimed Government Benefits	…Offered a bribe
Protection of property rights	-0.035***	-0.033***	-0.040***
	(0.006)	(0.000)	(0.005)
	[0.007]	[0.000]	[0.007]
N	25,770	25,801	25,825
First stage F	79.33	79.71	80.77
	(4)	(5)	(6)
	==1 if in the last 5 years the respondent at least once…		
	…Concealed faults when selling a second-hand product	…Bought possibly stolen goods	…Exaggerated an insurance claim
Protection of property rights	-0.000	-0.032***	-0.041***
	(0.994)	(0.001)	(0.000)
	[0.994]	[0.002]	[0.000]
N	25,314	26,623	52,656
First stage F	78.41	389.2	44.72
B: The Impact of Protection of Property Rights on Dishonest Attitudes			
	(1)	(2)	(3)
	Cannot always act honestly if you want to make money	Cheating on taxes is not wrong	Bribery is not wrong
Protection of property rights	-0.098***	-0.053***	-0.047***
	(0.002)	(0.007)	(0.000)
	[0.003]	[0.007]	[0.000]
N	27,165	27,332	27,365
First stage F	78.44	78.27	79.60
	(4)	(5)	(6)
	Concealing faults of a second-hand product is not wrong	Buying possibly stolen goods is not wrong	Exaggerating an insurance claim is not wrong
Protection of property rights	-0.041***	-0.099***	-0.106***
	(0.006)	(0.000)	(0.000)
	[0.007]	[0.000]	[0.000]
N	27,417	26,818	54,043
First stage F	78.78	387.5	43.51

Standard errors are clustered at the region level (NUTS1 or NUTS2).The p-values are reported in (parentheses). The p-values adjusted for multiple hypothesis testing are reported in [brackets]. *: significant at 10 percent level, **: significant at 5 percent level and ***: significant at 1 percent level.

Table A2
The Impact of Principal Component on Crimes, Misdemeanors and Dishonest Attitudes
(IV Results)

A: The Impact of Principal Component on Crimes and Misdemeanors			
	(1)	(2)	(3)
	==1 if in the last 5 years the respondent at least once…		
	…Misused or altered a document	…Falsely Claimed Government Benefits	…Offered a bribe
Principal component	-0.030*** (0.012) [0.013]	-0.028*** (0.001) [0.002]	-0.033*** (0.010) [0.012]
N	25,770	25,801	25,825
First stage F-stat.	48.29	48.99	49.30
	(4)	(5)	(6)
	==1 if in the last 5 years the respondent at least once…		
	…Concealed faults when selling a second-hand product	…Bought possibly stolen goods	…Exaggerated an insurance claim
Principal component	-0.000 (0.994) [0.994]	-0.031*** (0.001) [0.002]	-0.034*** (0.000) [0.000]
N	25,314	26,623	52,656
First stage F-stat.	48.08	1048.3	108.4
B: The Impact of Principal Component on Dishonest Attitudes			
	(1)	(2)	(3)
	Cannot always act honestly if you want to make money	Cheating on taxes is not wrong	Bribery is not wrong
Principal component	-0.083*** (0.000) [0.005]	-0.045*** (0.001) [0.009]	-0.040*** (0.000) [0.000]
N	27,165	27,332	27,365
First stage F-stat.	48.04	47.27	47.60
	(4)	(5)	(6)
	Concealing faults of a second-hand product is not wrong	Buying possibly stolen goods is not wrong	Exaggerating an insurance claim is not wrong
Principal component	-0.035*** (0.004) [0.006]	-0.096*** (0.000) [0.000]	-0.086*** (0.000) [0.000]
N	27,417	26,818	54,043
First stage F-stat.	47.11	1035.0	105.5

Standard errors are clustered at the region level (NUTS1 or NUTS2).The p-values are reported in (parentheses). The p-values adjusted for multiple hypothesis testing are reported in [brackets]. *: significant at 10 percent level, **: significant at 5 percent level and ***: significant at 1 percent level.

Table A3
The Impact of Judicial Independence on Crimes, Misdemeanors and Dishonest Attitudes (OLS Results)

A: The Impact of Judicial Independence on Crimes and Misdemeanors			
	(1)	(2)	(3)
	==1 if in the last 5 years the respondent at least once…		
	…Misused or altered a document	…Falsely claimed government benefits	…Offered a bribe
Judicial independence	0.001	-0.002*	-0.005***
	(0.002)	(0.001)	(0.002)
N	25,770	25,801	25,825
	(4)	(5)	(6)
	==1 if in the last 5 years the respondent at least once…		
	…Concealed faults when selling a second-hand product	…Bought possibly stolen goods	…Exaggerated an insurance claim
Judicial independence	0.005***	-0.021***	-0.004***
	(0.002)	(0.005)	(0.002)
N	25,314	26,623	52,656
B: The Impact of Judicial Independence on Dishonest Attitudes			
	(1)	(2)	(3)
	Cannot always act honestly if you want to make money	Cheating on taxes is not wrong	Bribery is not wrong
Judicial independence	-0.016***	-0.008**	-0.007***
	(0.007)	(0.005)	(0.002)
N	27,165	27,332	27,365
	(4)	(5)	(6)
	Concealing faults of a second-hand product is not wrong	Buying possibly stolen goods is not wrong	Exaggerating an insurance claim is not wrong
Judicial independence	-0.010***	-0.051***	-0.021***
	(0.003)	(0.006)	(0.004)
N	27,417	26,818	54,043

Standard errors are clustered at the region level (NUTS1 or NUTS2).The standard errors are reported in (parentheses). *: significant at 10 percent level, **: significant at 5 percent level and ***: significant at 1 percent level.

Table A4
The Impact of Protection of Property Rights on Crimes, Misdemeanors and Dishonest Attitudes (OLS Results)

A: The Impact of Protection of Property Rights on Crimes and Misdemeanors			
	(1)	(2)	(3)
	==1 if in the last 5 years the respondent at least once…		
A5	…Misused or altered a document	…Falsely claimed government benefits	…Offered a bribe
Protection of property rights	-0.007**	-0.010***	-0.021***
	(0.004)	(0.003)	(0.004)
N	25,770	25,801	25,825
	(4)	(5)	(6)
	==1 if in the last 5 years the respondent at least once…		
	…Concealed faults when selling a second-hand product	…Bought possibly stolen goods	…Exaggerated an insurance claim
Protection of property rights	-0.003	-0.017**	-0.004
	(0.005)	(0.007)	(0.002)
N	25,314	26,623	52,656
B: The Impact of Protection of Property Rights on Dishonest Attitudes			
	(1)	(2)	(3)
	Cannot always act honestly if you want to make money	Cheating on taxes is not wrong	Bribery is not wrong
Protection of property rights	-0.005	-0.005	-0.010**
	(0.010)	(0.008)	(0.004)
N	27,165	27,332	27,365
	(4)	(5)	(6)
	Concealing faults of a second-hand product is not wrong	Buying possibly stolen goods is not wrong	Exaggerating an insurance claim is not wrong
Protection of property rights	-0.011**	-0.063***	-0.014**
	(0.005)	(0.011)	(0.006)
N	27,417	26,818	54,043

Standard errors are clustered at the region level (NUTS1 or NUTS2).The standard errors are reported in (parentheses). *: significant at 10 percent level, **: significant at 5 percent level and ***: significant at 1 percent level.

Table A5
The Impact of Protection of Property Rights on Crimes, Misdemeanors and Dishonest Attitudes
(OLS Results)

A: The Impact of Impartial Courts on Crimes and Misdemeanors			
	(1)	(2)	(3)
	==1 if in the last 5 years the respondent at least once…		
	…Misused or altered a document	…Falsely claimed government benefits	…Offered a bribe
Impartial courts	0.001	-0.004***	-0.010***
	(0.002)	(0.002)	(0.002)
N	25,770	25,801	25,825
	(4)	(5)	(6)
	==1 if in the last 5 years the respondent at least once…		
	…Concealed faults when selling a second-hand product	…Bought possibly stolen goods	…Exaggerated an insurance claim
Impartial courts	0.006**	-0.027***	-0.004*
	(0.003)	(0.008)	(0.002)
N	25,314	26,623	52,656
B: The Impact of Impartial Courts on Dishonest Attitudes			
	(1)	(2)	(3)
	Cannot always act honestly if you want to make money	Cheating on taxes is not wrong	Bribery is not wrong
Impartial courts	-0.021**	-0.006	-0.012***
	(0.008)	(0.005)	(0.002)
N	27,165	27,332	27,365
	(4)	(5)	(6)
	Concealing faults of a second-hand product is not wrong	Buying possibly stolen goods is not wrong	Exaggerating an insurance claim is not wrong
Impartial courts	-0.008**	-0.064***	-0.019***
	(0.003)	(0.010)	(0.005)
N	27,417	26,818	54,043

Standard errors are clustered at the region level (NUTS1 or NUTS2).The standard errors are reported in (parentheses). *: significant at 10 percent level, **: significant at 5 percent level and ***: significant at 1 percent level.

Table A6
The Impact of Principal Component on Crimes, Misdemeanors and Dishonest Attitudes
(OLS Results)

A: The Impact of Principal Component on Crimes and Misdemeanors			
	(1)	(2)	(3)
	==1 if in the last 5 years the respondent at least once…		
	…Misused or altered a document	…Falsely claimed government benefits	…Offered a bribe
Principal component	-0.001	-0.006**	-0.014***
	(0.003)	(0.002)	(0.003)
N	25,770	25,801	25,825
	(4)	(5)	(6)
	==1 if in the last 5 years the respondent at least once…		
	…Concealed faults when selling a second-hand product	…Bought possibly stolen goods	…Exaggerated an insurance claim
Principal component	0.005	-0.034***	-0.006**
	(0.004)	(0.009)	(0.003)
N	25,314	26,623	52,656
B: The Impact of Principal Component on Dishonest Attitudes			
	(1)	(2)	(3)
	Cannot always act honestly if you want to make money	Cheating on taxes is not wrong	Bribery is not wrong
Principal component	-0.023**	-0.009	-0.013***
	(0.010)	(0.007)	(0.003)
N	27,165	27,332	27,365
	(4)	(5)	(6)
	Concealing faults of a second-hand product is not wrong	Buying possibly stolen goods is not wrong	Exaggerating an insurance claim is not wrong
Principal component	-0.014***	-0.086***	-0.028***
	(0.004)	(0.010)	(0.006)
N	27,417	26,818	54,043

Standard errors are clustered at the region level (NUTS1 or NUTS2).The standard errors are reported in (parentheses). *: significant at 10 percent level, **: significant at 5 percent level and ***: significant at 1 percent level.

Table A7
The Impact of Judge & Prosecutor Appointment Procedure on Crimes, Misdemeanors and Dishonest Attitudes (Reduced Form Results)

A: The Impact of Judge & Prosecutor Appointment Procedure on Crimes and Misdemeanors			
	(1)	(2)	(3)
	==1 if in the last 5 years the respondent at least once…		
	…Misused or altered a document	…Falsely claimed government benefits	…Offered a bribe
Instrument	-0.009***	-0.008***	-0.010***
	(0.003)	(0.002)	(0.004)
N	25,770	25,801	25,825
	(4)	(5)	(6)
	==1 if in the last 5 years the respondent at least once…		
	…Concealed faults when selling a second-hand product	…Bought possibly stolen goods	…Exaggerated an insurance claim
Instrument	-0.000	-0.018***	-0.010***
	(0.003)	(0.005)	(0.002)
N	25,314	26,623	52,656
B: The Impact of Judge & Prosecutor Appointment Procedure on Dishonest Attitudes			
	(1)	(2)	(3)
	Cannot always act honestly if you want to make money	Cheating on taxes is not wrong	Bribery is not wrong
Instrument	-0.024***	-0.013***	-0.012***
	(0.008)	(0.005)	(0.003)
N	27,165	27,332	27,365
	(4)	(5)	(6)
	Concealing faults of a second-hand product is not wrong	Buying possibly stolen goods is not wrong	Exaggerating an insurance claim is not wrong
Instrument	-0.010***	-0.056***	-0.026***
	(0.004)	(0.006)	(0.004)
N	27,417	26,818	54,043

Standard errors are clustered at the region level (NUTS1 or NUTS2).The standard errors are reported in (parentheses). *: significant at 10 percent level, **: significant at 5 percent level and ***: significant at 1 percent level.

Table A8
The Impact of Judicial Quality on Beliefs Regarding the Importance of Family, Being Rich, Fairness and Equal Treatment (IV Estimates)

A: The Impact of Judicial Independence				
	(1)	(2)	(3)	(4)
	==1 if the respondent believes…			
	…It is important to have money	…Most people try to be fair	…It is important people are treated equally	…Family is priority in life
Judicial independence	-0.020 (0.425)	0.020 (0.301)	0.001 (0.912)	0.015 (0.566)
N	26,195	26,041	25,924	24,769
B: The Impact of Protection of Property Rights				
	(1)	(2)	(3)	
	==1 if the respondent believes…			
	…It is important to have money	…Most people try to be fair	…It is important people are treated equally	…Family is priority in life
Protection of property rights	-0.029 (0.388)	0.029 (0.348)	0.001 (0.911)	0.020 (0.563)
N	26,195	26,041	25,924	24,769
C: The Impact of Impartial Courts				
	(1)	(2)	(3)	
	==1 if the respondent believes…			
	…It is important to have money	…Most people try to be fair	…It is important people are treated equally	…Family is priority in life
Impartial courts	-0.017 (0.404)	0.017 (0.327)	0.001 (0.911)	0.014 (0.562)
N	26,195	26,041	25,924	24,769
D: The Impact of Principal Component				
	(1)	(2)	(3)	
	==1 if the respondent believes…			
	…It is important to have money	…Most people try to be fair	…It is important people are treated equally	…Family is priority in life
Principal component	-0.024 (0.406)	0.024 (0.323)	0.001 (0.911)	0.019 (0.563)
N	26,195	26,041	25,924	24,769

Standard errors are clustered at the region level (NUTS1 or NUTS2).The p-values are reported in (parentheses). *: significant at 10 percent level, **: significant at 5 percent level and ***: significant at 1 percent level.