Analysis of bribery predictors for the student population. Evidence from Romania and Moldova

Aurelian-Petruș PLOPEANU*, Daniel HOMOCIANU**

Abstract

This study analyzes the bribery acceptance propensity. We used 5072 responses from students in economics (seven universities from the Republic of Moldova and two Romanian regions). We wanted to see communism's impact on this inclination from east to west in territories with Romanian origins. We used purposive sampling, Data Mining, OLS, and Logit regressions with marginal effects and prediction nomograms. Theoretically, we found that proximity to Western countries matters for explaining differences between models. We also discovered strong common influences: competition (negative and mightier for Central-Western Romania), accepting undue advantages, and the immoral act of buying stolen goods (both positive and more potent for Moldova). We additionally identified peculiarities: the desire to become an entrepreneur, anti-democratic attitudes, attitude towards the interventionist role of the state in the economy, nepotism, tax evasion behaviour, inherited sense of responsibility, altruism, and hard work, mother's faith in God, interpersonal trust and individual freedom.

Keywords: bribery, historical regions, data mining, logit and OLS regressions, risk prediction nomograms

Introduction

Due to its complexity, corruption is a very difficult term to define. Despite a large set of explanations available, the concept has various facets that still induce confusion. An authoritative definition, according to which the phenomenon of corruption represents "the abuse of entrusted power for private gain" (Transparency International, 2017). Furthermore, we take into consideration a particular and, we

^{*} Aurelian-Petruș PLOPEANU is Researcher at the Instittute of Interdisciplinary Research, Humanities and Social Sciences Research Department, Alexandru Ioan Cuza University, Iasi, Romania; e-mail: aplopeanu@gmail.com.

^{**} Daniel HOMOCIANU is Lecturer at Department of Accounting Business Information Systems, and Statistics, Faculty of Economics and Business Administration, Alexandru Ioan Cuza University, Iasi, Romania; e-mail: daniel.homocianu@uaic.ro.

may add, the most common facet of corruption, namely bribery (Georgieva, 2017; Nam, 2018). According to Rose-Ackerman (1999), a definition of a bribe is a payment, in money or kind that involves a reciprocal obligation and aims at inducing the unethical behaviour of the person receiving bribes.

For policymakers and overall civil society, corruption seems to be an endemic and pernicious phenomenon. Sometimes is even seen as a curse. It can also appear as a profound social illness without an obvious remedy. It generates lower economic growth (Johnson *et al.*, 2011), higher poverty rates, inequality (Jong-Sung and Khagram, 2005), and lower foreign investment (de Jong and Bogmans, 2011). It also distorts the trade, generating political instability and poor public governance efficiency (Ko and Samajdar, 2010, pp. 508-509) and affecting the quality of democracy (Villoria *et al.*, 2013) and the levels of life satisfaction (Rodríguez-Pose and Maslauskaite, 2012). Also, it increases transaction costs (Zhang, 2009), undermining interpersonal and institutional trust (Mishler and Rose, 2001). It is a fact that, at the micro-level, corruption generates frustrations and anxiety regarding the interaction with public institutions' quality and efficiency (Uslaner and Badescu, 2004). Therefore, fighting against corruption is universal. It is also seen as one of the most important objectives to reach to generate sustainable development for generations.

This article aims to investigate the influence of personal and inherited characteristics on the acceptance of the act of bribery. We do this to understand better the role of non-pecuniary factors that may influence this corrupt phenomenon across three historical regions, being aware of the fact that any individual decision-making highly depends on a set of historical, institutional, cultural, social, or legal determinants (Cameron et al., 2009). Our paper considers three particular provinces which were under the rule of various former empires (e.g., the Ottoman, Russian or Habsburg ones). It is about Central-Western Romania (composed of historical regions, such as Transylvania, Crisana, Maramures, Banat, and North-Western Bucovina), Southern and Eastern Romania (Moldova and Wallachia), and the Republic of Moldova. The reason for choosing them relies on the fact that none of the identified articles considered this regional distribution of respondents according to their previous belonging to a particular long-gone empire. The Habsburg Empire dominated different parts from Central and Western Romania until 1918, Moldova and Wallachia were dependent on the Ottoman Empire until the middle of the 19th century, when they first united and formed the United Principalities and, later, the Kingdom of Romania. In the Republic of Moldova, the Ottoman Empire ruled for the most part. Between 1812 and 1917, the same did the Russian one. Another reason for choosing these regions is related to the inter-regional differences between them in terms of economic development. We mean those existing back in 1918 (when the last major Empire, namely the Habsburg one, ceased to exist) and the ones manifesting nowadays. For instance, the Republic of Moldova (Bessarabia) was and still is the least developed region, while Romanian regions presented particular trends, still visible today. Many authors emphasize the superiority of the former

Habsburg territories over Moldova and Wallachia in terms of economic development (Tudor and Matis, 2010). Other recent processed statistics underline the idea that the former Kingdom of Romania recorded better macroeconomic indicators when compared to the provinces incorporated in 1918 – the Great Union year (Schulze, 2007; Markevich, 2019; SEEMHN, 2014).

We further investigate if individual subjective mentalities, attitudes, preferences, and inherited values matter and to which extent. For instance, we are aware of the fact that the belonging of a particular region to the former Habsburg Empire may have echoes until today in terms of trust in public institutions (Becker, 2005). Therefore, we are interested in analysing if individual attitudes differently influence bribe payments depending on whether their residences' locations belong to a peculiar former empire (e.g., Ottoman, Russian or Habsburg Empire). It is a fact that a society with a high level of corruption or injustice promotes these at the individual level (Ramamoorthy *et al.*, 2015). Moreover, we explore the elements behind the decision to engage in bribery in an environment with a lower level of corruption (Romania) in comparison with the Republic of Moldova, knowing that, in 2018, according to Transparency International' Corruption Perception Index, the latter was ranked 117th out of 180 countries, while Romania (RO) was ranked 61st.

Based on the previous report, the perception of corruption is still alarming and even increased. And this when compared with the one from a year before. In 2018, many social demonstrations against the government took place in Romania. These protests augmented because of the fear that the current government attacked the rule of law, abiding from the road to transparent and efficient public institutions. Therefore, Romania ranks among the five most corrupt countries in the European Union. A recent report from the Commission¹ to the European Parliament and the Council (2018) emphasizes a notable fact. The fight against corruption should strengthen since the risk to take backward steps increased. And this because of the recent justice reforms in Romania. They made all the progress in the last years fade away.

By analysing the subjective individual attitudes and preferences that may influence the attitude towards the acceptance of bribes, this study fills a gap in the specialized literature. Also, it enriches our understanding of corruption, particularly in Romania, by considering the internal influences, otherwise very difficult to measure, that may affect the attitude towards such behaviour.

The remaining part of the paper has four sections:

- Section 2 describes the relevance of the literature review concerning our topic.
- Section 3 explains the data and methods used to test our hypotheses.
- Section 4 discusses the previous empirical analysis.

¹ Report from the Commission to the European Parliament and the Council (On Progress in Romania under the Cooperation and Verification Mechanism), (retrieved from https://ec.europa.eu/info/sites/info/files/progress-report-romania-2018-com-2018-com-2018-851_en.pdf).

-Section 5 emphasizes the conclusions, the limitations of our study, and the implications of the results.

1. Literature review

The literature on the topic of bribery is approached from several perspectives. Bribery is considered an immoral behaviour for societies for the simple fact that it violates the divine paradigm on earth (Logue, 2005). This fact appears in the Holy Bible, in the Book of Deuteronomy (10: 17): "For the Lord, your God is God of gods, and Lord of lords, the great God, mighty and awesome, who shows no partiality nor takes a bribe"². It is also unethical because it breaks the principle of reciprocity in terms of trust and promise (Carson, 1987). Other scholars neglect these ethical rules, indicating that such corrupt behaviour occurs due to institutional failures (Colombatto, 2003).

The literature on bribe propensity has improved to a certain extent, it is still a topic insufficiently explored, especially at the individual level (De Jong and Van Ees, 2014). Usually, at the micro-level, the models regarding this topic take into consideration the theory of planned behaviour (Ajzen, 1985; 1991). The latter exhibits the intention presence, predated by subjective values, norms, and attitudes, which further influence the unequivocal decision. Some scholars (Madden *et al.*, 1992, p. 3) also stated that behavioural intentions, which are the immediate antecedents to behaviour, are a function of salient information or beliefs about the likelihood that performing a particular behaviour will lead to a specific outcome. Moreover, they emphasized that behavioural beliefs represent the underlying influence on an individual's attitude toward performing the behaviour. In contrast, normative beliefs influence the individual's subjective norm about performing the behaviour.

The overwhelming effect of automatic thinking over the rational one also appears in the literature (Stahl *et al.*, 2017). Zaloznaya (2014) stated that in a society where the act of corruption is the mighty norm, individuals tend to be more corrupt because they consider such behaviour normal. Frank and Schulze (2000, p. 110) state that "Students do not alter their attitude towards corruption as they progress through university, regardless of whether they are students of economics or any other field. The latter contradicts the notion that the more self-interested behaviour of economists is a result of economic education. It rather supports the self-selection hypothesis."

Čábelková and Hanousek (2004) consider that corruption perceptions have the potential to strengthen or reduce real corruption. They encourage or not individuals to pay or not bribes. When conducting quantitative research in Ukraine, the same authors found the following. If a person considers that an institution is highly corrupt,

² Holy Bible, Bucharest: Publishing House of the Bible and Orthodox Mission Institute, 2019.

they are more likely to pay bribes in certain situations. Therefore, he stimulates and perpetuates the entire phenomenon associated with corruption.

Hauk and Saez-Marti (2002) stated that individuals with certain culturallyrooted or socially embedded patterns of corrupt actions act and, hence, they finally create a rotten environment. The reciprocity (Shen *et al.*, 2011) and diffusion of responsibility (Mazar and Aggarwal, 2011), as examples of deeply rooted values, are variables that increase the intention to receive and pay bribes (Barr and Serra, 2010). Regarding incentives, opportunities, and norms, Gorsira *et al.* (2016) found that individuals who are more likely to act in a corrupt way are doing this because of a cocktail of motives, from earnings to pleasure, and no fear towards legal constraints.

The activity of buying stolen goods is considered illicit. It becomes stimulated when the people's perceptions of judicial independence are distorted or suffer considerable depreciation (Mocan *et al.*, 2020). This act is also condemned by regular church attenders or even by certain religious denominations. Therefore, it is not morally and religiously frequentable (Woodberry, 2008). Moreover, the decision to avoid paying public taxes because of their high percentage is considered a way of engaging in bribery. And this because is evident that easy and transparent access to resources (e.g., for firms) not accessible in the absence of a coherent legislative framework depends on such a rational behaviour (Yan and Qi, 2020).

Different other variables seem to be mighty triggers for bribery. For instance, the stimulating effect of the competition is one of them. In the literature, we found that an increased level of competition among public officials and bureaucrats usually reduces the practices associated with bribery (Ryvkin and Serra, 2020). Quite interesting, it offers incentives for those willing to pay bribes to follow all the instructions to obtain the legal document instead of inflating corruption (Drugov, 2010). Furthermore, from other perspectives, we have chosen the variable related to one's intentions to become an entrepreneur. And this since there is much evidence for a negative relationship between entrepreneurial likelihood and the subjective perceptions regarding the level of corruption from a chosen environment (Ghura *et al.*, 2019).

In many developing countries, politicians try to gain votes by emphasizing that the corruption phenomenon, including bribery, must be eradicated. Although many civilians understand the endemic problem brought by such pernicious acts, they tolerate it, continuing to pay or receive bribes in certain situations. This tolerant attitude can explain itself through the existing social networks consolidated due to poor public institutions and services (Rose-Ackerman, 1999). Corruption usually seems to interfere with the decisions coming from the public officials and the statist regulations that usually generate incentives for a corrupt environment (Mungiu-Pippidi and Dadašov, 2016). Still, the ordinary people's tendency to pay bribes is considered a way of reinforcing and perpetuating a corrupt system in societies (Tavits, 2005). The previous idea is valid. And this applies especially when citizens perceive the public administration as ineffective and improper (De Sousa, 2008).

From another perspective, Manzetti and Wilson (2007) stressed that when a corrupt government is elected and supported by the voters who benefit from its capacity to distribute public goods, they manifest high tolerance for the public institutions, thus perpetuating inefficient institutions that stimulate poverty and inequalities.

Another potential determinant of corruption relates to types of state involvement in the economy (e.g., fiscal and regulatory) (Bel, 2021). The consistent commitment in the economy means poor institutional functioning and tentacular bureaucracy (Galperin *et al.*, 2020). Therefore, it incentivizes the desire for bribery payments (Malesky *et al.*, 2015). The role of individual freedom as the main engine for progress in any society is considered potent concerning bribery propensity. We bear in mind the idea according to which those who think about this role given to liberty have at least the mental possibility to get involved in interactions generating such decisions, being aware of them. Another significant influence towards bribery propensity may play the level of interpersonal trust. A high trust level in most people is highly corrosive to the perception of corruption (Banerjee, 2016; Seligson, 2002).

To the best of our knowledge, parental religiosity is a variable not considered regarding the prediction of bribery behaviour. We have selected this predictor for analysis because parental role models may have a decisive effect on children's behaviour and attitude towards morality and lawfulness (Di Stefano, 2016). Furthermore, we consider that altruism may generate (un)conscious effects with the potential to increase the well-being of others in the absence of efficient institutions that stimulated an individual to behave unethically. Gneezy *et al.* (2014) demonstrate that the higher the levels of altruism, the lesser the levels of cheating, therefore altruism attenuated the negative effect of such behaviour. Gino *et al.* (2013) emphasize that individuals are more predisposed to behave unethically if this behaviour generates benefits for others. Hence, such a lack of ethics seems acceptable. Moreover, Muñoz-Izquierdo *et al.* (2014, p. 4) conclude that the results suggest that, when altruism is made salient, individuals pay attention to their moral standards and their self-concepts, decreasing their tendencies to engage in dishonest actions.

The feeling of responsibility is another predictor of bribery intention we took into consideration. We have considered it because the literature stated that the sense of responsibility, together with the powerful locus of control, are inimical to unethical conduct (Reckers and Samuelson, 2016). Moreover, it seemed correlated with feelings of guilt (Abraham and Pane, 2014). The latter is also responsible for attenuating the desire to act in an immoral way (Tangney *et al.*, 2007).

The role of hard work to curb corrupt behaviours is also here. As considered by other scholars, hard work is an essential input. It brings success, along with others (efforts and skills). It positions itself on the opposite side with corrupt activities and attitudes (Amini and Douarin, 2020).

The large number of items initially taken into consideration relates to significant elements. These have the potential to influence the decision to be engaged in bribery. Therefore, we took into account in this study most of the ideas above.

In the light of all these ideas, we started from the following hypotheses:

H1: A behaviour that indicates taking advantage of undue benefits, favouritism, tax evasion, including not paying for public services, and buying stolen goods (a crime in mature countries such as the United Kingdom3) also indicates a high chance of bribe acceptance.

H2: The level of etatism is a potent predictor of the intention of bribe payment.

H3: The role of individual commitment to free competition and interpersonal trust influences the intention towards bribe payments.

H4: The traits inherited from parents, such as altruism, responsibility, and work ethics, could be considered inhibitors of potential corrupt behaviour.

2. Data and methods

This article is based on survey data conducted during the academic year 2017-2018 among 5 072 students in economics from five Romanian universities: Alexandru Ioan Cuza University of Iasi (UAIC), "Babes-Bolyai" University of Cluj-Napoca (UBB); "Lucian Blaga" University of Sibiu (ULBS); "Stefan cel Mare" University of Suceava (USV); Academy of Economic Studies from Bucharest (ASE), and two from the Republic of Moldova, namely the Academy of Economic Studies of Moldova from Chişinău (ASEM) and "Alecu Russo" State University from Bălți (USB). The original purpose of the survey was to explore and explain the subjective mentalities, attitudes, and preferences of the Romanian and Moldavian students in economics towards becoming entrepreneurs, migrating to Western Europe, and bribery.

Choosing this type of students has nothing to do with convenience sampling, but we were fully aware that this category is more likely to behave in a self-interested way than others (Frank and Schulze, 2000), being, therefore, more tempted by potential corrupt behaviours. Because the sampling technique mostly relied on the authors' judgment when choosing who to ask to participate, it can be considered more as a judgment / purposive sampling. Still, given the dual nature (both social and economic) of the phenomenon under analysis, an important criterion for constructing the sample relied on the idea of randomly including students enrolled in various economics modules, from both undergraduate and master programmes. These students were enrolled in five major Romanian universities and two Moldavian ones, coming from different locations, with various standards of living, as detailed at the beginning of the section dedicated to results and discussions.

The questionnaire was distributed in printed format and completed face-toface at the beginning or end of courses/seminars/labs. And this because of the need

³ U.S. Department of Justice, Office of Community Oriented Policing Services, Stolen Goods Markets, https://www.hsdl.org/?view&did=682653 or https://www.ojp.gov/ncjrs/virtual-library/abstracts/stolen-goods-markets.

for supervision and better control of the quality of responses. To ensure the anonymity of respondents, we did not collect any personal identification data, such as names or contact information. After collecting the completed questionnaires in physical format, the data was introduced by using Google Sheets. The most important questions included in the survey have been selected after previous documentation relating to the structure of the World Values Survey⁴.

The main goal is not just to present a set of variables that may stimulate or not the attitudes towards bribe payments, based on geographical or historical background, but to understand the reasons why these individuals consider bribery justifiable in certain conditions. Also, the article focuses on the differences in the perception of bribe payments across three groups of students from Romania and the Republic of Moldova. These two countries share the same language and culture, but their trajectory in the last almost two hundred years was different. Romania is a member of the European Union (EU) and North Atlantic Treaty Organization (NATO) and a capitalist country de facto. The Republic of Moldova still has a strong communist imprint in the economy and society and seeks a sustainable identity.

RM is still divided between the desire to integrate into the Western capitalist institutions and the proximity to the Russian paradigm. We believe that this status quo influences the mentalities, attitudes, and preferences regarding the attitude towards bribe payments.

The questionnaire was conducted exclusively in Romanian, with no linguistic and conceptual ambiguities, since we have additionally conducted pretest analysis. Also, when we have translated every question (Table A, Appendix) into English, formulations did not generate any confusion since the original one was clear enough.

For cleaning the data and making all the necessary derivations, we have used spreadsheet filters, including the ones on the coordinates to the respondents' permanent residences. The missing values for some questionnaire items, especially for those with an associated scale, have been treated as DK//NA (Do not know / No answer) and assimilated to the middle of the scale. In the case of RM, the questionnaire item related to the income and the corresponding options (7-point Likert scale) have been adapted to the local currency (Moldavian Leu vs. Romanian Leu– almost a ¹/₄ ratio according to the exchange rate at that moment). Later, after collecting all responses, currency differences no longer created compatibility issues. In the case of variables corresponding to education (e.g. parents' education), because of the differences between the education systems of the two countries, we only considered the number of years of total schooling. In terms of respondents' grades (and the average of grades), there were no differences between Romania and RM.

The geographical distribution of responses was represented by using the Google Fusion Tables (GFT). Using this online tool, we generated an online query-

⁴ World Values Survey data, retrieved from https://www.worldvaluessurvey.org/ WVSContents.jsp - Data and Documentation section.

able and highly interactive map with pushpins for different locations corresponding to the permanent residence of respondents.

To identify the common and most powerful influences of all the independent variables considered in this study (Table 1), we tested using the data mining add-in in Microsoft Excel (the classification algorithm based on the Naive Bayes technique) on the entire dataset (5072 responses), a subset corresponding to Romania (3999) and three others for the Republic of Moldova (RM, as the eastern neighbour of Romania today: 1073), SE-RO (or Southern and Eastern Romania, once former Kingdom of Romania - KR: 2137) and CW-RO (or Central-Western Romania, once occupied by the former Habsburg Empire-HE and consisting in Transylvania, Crişana, Maramureş, Banat and North-Western Bucovina: 1862). The results of using this add-in were persistent and query-able DM models in SQL Server Analysis Services (SSAS).

To estimate the respondents' propensity to pay bribes and assess the most important influences for testing the validity of all formulated hypotheses, we used a general econometric model, namely the one based on logit regressions (eq.1).

$$\text{Logit}(\mathbf{p}) = \ln\left(\frac{\mathbf{p}}{1-\mathbf{p}}\right) = \beta_0 + \sum_{j=1}^{m} \beta_j * \mathbf{X}_j + \varepsilon, \tag{1}$$

Where: p is the probability of the intention to pay bribes; Xj - the independent variables (Tables 1 and 2), with j=1, 2... m; βj - the logit coefficients for each category of the dependent variable (Tables 1 and 2), and ϵ is the error.

To correct for any form of heteroskedasticity, robust standard errors have been calculated. Moreover, a hierarchical approach with successive models, each adding more predictors, was considered for performing robustness checks (Tables 3-5, and A1-A3, Appendix).

To avoid multicollinearity, we reported the maximum absolute values of the correlation coefficients (Mukaka, 2012) in the predictors' matrices (<0.25 for all three most comprehensive regional models). Additionally, we performed Ordinary Least Square (OLS) regressions (Tables A1-A3, Appendix) and reported the maximum computed VIF (Variance Inflation Factor) against the maximum accepted one (1 / (1-overall models' R^2)). A VIF greater than this limit indicates (Vatcheva *et al.*, 2016) that the correlation between the predictors is stronger than the regression relationship, and multi-collinearity can affect their coefficient estimates (Freund and Wilson, 1998).

To compare the influences inside and across models in terms of magnitude, we have used two methods. The first one is based on computing and reporting the average marginal effects. The second one is more visually oriented and consisted of generating logit-based probability prediction nomograms (Zlotnik and Abraira, 2015).

Subsets	Max nu	mber of	obs. fc	or CW	'-RO: 1	,862	Max nu	mber of	obs. f	or SE-	-RO: 2	,137	Max	number	of obs	. for R	RM: 1,0	073
			Std.			Yes			Std.			Yes			Std.			Yes
Variables	Median	Mean	Dev.	Min	Max	1) %	Median	Mean	Dev.	Min	Max	1)%	Median	Mean	Dev.	Min	Max	(1) %
inherited_hard_work						62						61						66
inherited_good_manners						89						- 90						85
inherited_independence						60						55						59
inherited_sense_responsibility						83						83						83
inherited_tolerance						74						72						73
inherited_perseverance						65						65						51
inherited_obedience						11						7.9						12
inherited_creativity_imagination						44						39						51
inherited_altruism						40						36						27
inherited_respect4elders						65						65						71
inherited_respect4traditions						43						39						55
clear_lasting_inherited_values						48						46						45
number_siblings	1.00	1.12	1.35	0.00	9.00		1.00	1.09	1.11	0.00	9.00		1.00	1.25	1.10	0.00	9.00	
income_level	4.00	3.85	1.86	1.00	7.00		3.00	3.59	1.91	1.00	7.00		3.00	2.79	1.33	1.00	7.00	
mother_education	12.00	13.07	2.97	4.00	22.00		12.00	12.87	2.87	8.00	22.00		12.00	13.14	3.64	8.00	22.00	
father_education	12.00	12.68	2.81	4.00	22.00		12.00	12.70	2.77	8.00	22.00		12.00	12.89	3.60	8.00	22.00	
both_parents_private_sector						46						48						39
only_mother_private_sector						8.8						9.2						8.8
only_father_private_sector						18						21						23
both_parents_faith_God						55						45						47
only_mother_faith_God						27						32						29
only_father_faith_God						2.9						3						4.1
both_parents_gone_abroad						11						9.7						15
only_mother_gone_abroad						5.6						7.7						10
only_father_gone_abroad						16						18						22
parental_severity	7.00	6.31	2.33	1.00	10.00		6.00	6.11	2.27	1.00	10.00		7.00	6.43	2.35	1.00	10.00	
urban						70						66						74
Ro						100						100						0
fHEt						100						0						0
MoldInRo						0						0						15.10
male						31						29						26

Table 1. Descriptive statistics for the three subsets of respondents corresponding to CW-RO, SE-RO, and RM

114 | Aurelian-Petrus PLOPEANU, Daniel HOMOCIANU

	20.00	20.00	2.20	10.00	49.00	i	20.00	20.49	2 41	10.00	17.00	i	20.00	20.40	2 10	17.00	42.00	
age	20.00	20.00	2.29	18.00	48.00		20.00	20.48	2.41	18.00	47.00		20.00	20.40	2.18	5 00	43.00	
avg_nso	9.10	0.99	0.03	0.00	10.00		9.15	9.04	0.05	5.10	10.00		0.03	0.75	0.70	5.80	10.00	
avg_BG	8.64	8.46	0.90	6.00	10.00		8.70	8.54	0.89	5.50	10.00		1.15	7.60	0.86	5.00	10.00	
no_books_read_yearly	2.00	2.44	0.99	1.00	6.00		2.00	2.46	1.00	1.00	6.00		2.00	2.57	1.04	1.00	6.00	
level_interpersonal_trust	3.00	2.54	0.93	1.00	5.00		2.00	2.44	0.87	1.00	5.00		2.00	2.42	0.88	1.00	5.00	
high_believe_in_God						73						72						64
trust_at_least_one_institution						55						56						49
labor_source_success						91						93						88
ever_worked						77						72						69
searching_job						53						53						53
think_become_entrepreneur						20						19						28
only_strong_connections_evolve_prof						34						29						32
accept_undeserved_state_fin_adv						9.3						9.7						41
accept_buying_stolen_goods						22						27						33
accept_notbuying_public_transp_tickets						15						14						29
accept_notpaying_public_taxes						16						18						36
accept_pay_bribes (OUTCOME)						12						12						27
individual_freedom_factor_progress						73						73						75
clear stimulating effect competition						85						89						84
clear_conviction_state_involve_economy						75						74						66
clear conviction state creates prosperity						44						43						54
clear conviction thrive state instit						45						45						48
clear conviction prog taxation benef						47						50						55
clear conviction income unif distrib state						45						43						45
clear conviction relig supported state						21						21						19
clear conviction individualism welfare						38						39						53
clear conviction democracy best						53						54						66
clear_conviction_relig_infl_politics						16						14						12

Source: Authors' calculations in Stata 16 MultiProcessing (MP).

We identified common and particular influences by applying different procedures of variables selection in Stata 16. Next, we have decided to check if their common part passes or not the robustness checks along with many scenarios for each of those three specific areas (CW-RO, SE-RO, and RM) using logit regressions.

3. Results and discussions

This section presents the obtained results after performing logit regressions starting from the selected set of variables, with the indication of all significant influences.

The geographical distribution of responses as a query-able pushpin map of coordinates in GFT corresponding to respondents' location of origin was made starting from all 5072 records (Figure A-O1, Online Appendix). The Rows 1 button in GFT was used to create an online interactive representation of all respondents' residencies (H for CW-RO; * for SE-RO and R for RM) which ensured access to the source data and basic support for replication of results (Figure A-O1, Online Appendix).

Considering the idea above, we have provided the results (top five influences) after performing 10 data mining tests (Figure A-O4, Online Appendix) in SSAS using the Naive Bayes algorithm trained on 75% and 100% of the entire dataset, the one for Romania, and those three for the aforementioned regions. Their common part (three influences corresponding to accept buying stolen goods, accept undeserved state financial advantages, the clear stimulating effect of competition) obtained in SSAS and the same results when using the cross validation-based LASSO (Tibshirani, 1996) variable selection procedure in Stata 16 led us to the idea of a triad of influences at the core of all regional models considered.

When considering an additional variable (fHEt) derived using a custom spreadsheet function named dot_in_poly, the latter (function design inside a .xlsm file - Figures A-O2 and A-O3, Online Appendix) was used to check the belonging (Yes: 1 meaning CW-RO, No: 0 meaning SE-RO or RM) of each respondent location to the interior of a polygon corresponding to that part of Romania once under the occupation of the former Habsburg Empire. When used for performing logit regressions on the overall dataset (all 5072 records), this split variable proved to be able to exert a significant negative influence, suggesting also that this geographical separation is important in terms of bribery. To be more explicit, belonging to CW-RO (Ro=1 and fHEt=1) as an indication of belonging to western values and mentalities inhibits the behaviour of bribery when compared with the other two regions, namely SE-RO (Ro=1 and fHEt=0) and RM (Ro=0 and fHEt=0). This was another reason to consider only the three corresponding subsets for regression analyses when controlling for individual, inherited and background characteristics.

The results of the regressions are presented below. The variable accept_notbuying_public_transp_tickets (a particular form of avoiding fees for

public transportation) was found responsible for collinearity (the Max OLS computed VIF overpassed the Max OLS acceptable VIF if including it) when included together with accept_notpaying_public_taxes (accept not to pay public taxes/fees). The latter proved to be more powerful in terms of marginal effects and resulting accuracy. Therefore, accept_notbuying_public_transp_tickets has been removed from the models although the Data Mining algorithm using the Naïve Bayes technique (relying on the hypothesis of predictors' independence) suggested it. We believe that the individuals who have their permanent residences in cities and villages from CW-RO (Table 2 and Figure 1), possibly due to a historical imprint which still plays an important role in the trust in local public institutions (Becker *et al.*, 2016) and to their exposure to local opportunities and incentives, are less inclined towards bribe payments, even as a mere intention.





Source: Authors' representation

VARIABLE / MODEL	(1)	(2)	(3)	(4)	(2)	(9)	(2)	(8)	(6)	(10)	(11)
accept_undeserved_state_fin_adv	0.1425***			0.1168***	0.1150***	0.1155***	0.1208***	0.1153***	0.1178***	0.1111***	0.1117***
accept_buying_stolen_goods	(61100)	0.0954***		0.0777***	0.0751***	0.0753***	0.0798***	0.0781 ***	0.0790***	0.0764***	0.0746***
clear_stimulating_effect_competition		(1010)	-0.1303*** (0.0159)	(0.1178^{***})	-0.1169^{***}	-0.1154*** -0.1154***	-0.1030^{**}	-0.1062***	-0.1071 *** -0.1071 ***	-0.1129^{***}	-0.0787 ***
only_strong_connections_evolve_prof			(1010-0)	(0010:0)	0.0362^{*}	(1010:0)	(2010-0)	(0010.0)	(1010-0)	(-010:0)	0.0406^{**}
think_become_entrepreneur					(c	0.0383* (0.0160)					0.0343*
clear_conviction_state_ involve_economy							-0.0679***				-0.0583***
clear_conviction_democracy_best							(0+10.0)	-0.0519***			-0.0441**
titori ototo oriente accio								(0.0142)	***30300		(0.0142)
clear_conviction_unive_state_insut									(0.0149)		(0.0150)
inherited_sense_responsibility										-0.0472**	-0.0431**
Z	1862	1862	1862	1862	1862	1862	1862	1862	1862	(6010.0)	(010.0)
chi^2	62.4208	39.0055	67.1471	136.7040	138.5407	139.0581	146.9009	140.8872	152.0309	142.0244	168.3405
d	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R^2	0.0406	0.0274	0.0453	0.0999	0.1046	0.1040	0.1150	0.1097	0.1093	0.1058	0.1435
Max.Abs.Val. for Correl.Coef. (Predictors' Correlation Matrices)	0.0000	0.0000	0.0000	0.1144	0.1144	0.1144	0.1836	0.1787	0.1640	0.1144	0.1836
AUC	0.5892	0.5964	0.6111	0.7095	0.7178	0.7173	0.7362	0.7218	0.7335	0.7244	0.7675
p GOF	0	0	0	0.0592	0.0198	0.2276	0.0028	0.0722	0.0144	0.1698	0.8268
chi^2 GOF	0.00	0.00	0.00	9.08	22.65	14.10	28.42	18.42	23.63	15.29	240.40
AIC	1282.3403	1299.8643	1276.0552	1207.3326	1203.0159	1203.7955	1189.1386	1196.3179	1196.7318	1201.5231	1161.2927
BIC	1293.3991	1310.9231	1287.1140	1229.4503	1230.6629	1231.4426	1216.7857	1223.9649	1224.3788	1229.1701	1216.5867
max P nomolog - bigger than	0.2000	0.1000	0.1000	0.5000	0.5000	0.6000	0.6000	0.5000	0.5000	0.6000	0.7000
Notes: Robust standard errors in parenth	leses. *, **, ***	indicate sign	ificance at 5%	6, 1% and 1%	. The coefficie	nts have been	computed as a	werage margin	nal effects.		
Source: Authors' calculations in Stata 10	6 MP for all spe	cifications/sc	enarios/mode	ls with the pro	gressive inclu	sion of those t	hree common	most importar	nt variables (c	ore - first four	models) and
others (starting from model 5).											

Table 2. Logit models based on responses of students from CW-RO

The positive influences (Table 2 and Figure 1) are given by several variables. The most powerful is favouritism, while the second magnitude comes from the possibility to buy stolen goods if cheaper than on the market. Also, the idea that the intention to become an entrepreneur after graduation and the opinion that only through nepotism or by pulling strings could someone have a successful career in the origin country are other positive predictors of the attitude towards bribe payments. The idea of a positive relationship between favouritism and bribery is validated by previous research, such as the Global Corruption Barometer¹ in which individuals who consider that their local public services are mostly corrupt are determined to pay a bribe. To be more specific, from those interviewed from the Republic of Moldova, 40 to 50% said they paid a bribe, while 20 to 30% in the case of Romanians.

The positive influence exerted by the desire to become an entrepreneur on the bribe phenomenon may be explained as it follows: a highly restrictive regulatory environment, also supported by poor legal and economic institutions, increases the likelihood of business students to paying bribes to overcome bureaucratic barriers in their intention to set up a start-up business (Heuer and Liñán, 2013).

The strongest influence against the desire to pay bribes (a negative influence) is exerted by the conviction that competition makes people more diligent, productive, and innovative. The result emphasizes the fact that those individuals who put a great emphasis on the positive role of competition for interpersonal progress are eager to benefit from this status quo. Moreover, this meritocratic and competitive environment manifests as an important trigger to isolate and reduce the need to be engaged in corrupt behaviours. Moreover, other negative influences are exerted by the following ideas: the state should intervene more in the economy, democracy is the best form of government of a human community, a society is prosperous if institutions are governed by the state and the sense of responsibility, as a value inherited from parents, is important in life. The negative influence of a more interventionist role of the state in the economy on bribery is in line with other previous findings, such as Tanzi's (1994). This author emphasized that the more the state is involved in society, the more resources will be hijacked for bribery and undue benefits for political clients. The negative impact of the conviction about democracy which reduces the temptation of bribes is in line with previous studies (MacDonald and Majeed, 2011). It is considered that the older the democracy, the stronger the fight against the phenomenon of corruption (Beck et al., 2001).

The negative influence of the conviction regarding the proactive role of the state in the economy on bribe is in contradiction with other previous findings, in

¹ Global Corruption Barometer (2017), Transparency International (retrieved from https://www.transparency.org/whatwedo/publication/people_and_corruption_citizens_voice s_from_around_the_world).

which it was demonstrated that inefficient public bureaucracies generally create more bureaucratic obstacles to extract new bribe payments (Bertrand *et al.*, 2007). Our latter negative finding is in line with other previous research which emphasizes that the sense of responsibility mediates the stimulating effect of collectivism towards the phenomenon of bribery (Mazar and Aggarwal, 2011). The result envisages the fact that the individuals who internalized the inherited quality of responsibility are less predisposed to pay bribes in certain situations, acting as moral actors who assume their professional and social duties and obligations in rational and legal ways.





The preference to receive undeserved financial benefits from the state (Table 3 and Figure 2), the willingness to purchase stolen goods, and the choice to evade tax payments are positive predictors for the opportunity to pay bribes.

Six negative influences are illustrated in Table 3: the convictions that competition makes people more diligent, productive, and innovative, that the state should intervene more in the economy, altruism and hard work, as inherited values from parents, are important in life. Also, the higher the interpersonal trust, the lesser

Source: Authors' representation

the propensity to pay bribes. This last finding is consistent with another previous research (Rothstein, 2000), stating that an individual with high levels of trust in other people is less oriented towards paying bribes.

The explanation lies in the fact that when interpersonal trust is high enough, transaction costs diminish, informal institutions work properly, and the propensity to be involved in corrupt behaviours fades. The negative influence of altruism on bribery is also consistent with other articles, such as Muñoz-Izquierdo *et al.* (2014). The result could be explained in the following way. Altruistic citizens penalize corrupt behaviours because they are prepared to act in society morally, according to their inherited beliefs.

Hard and rigorous work is strongly connected with a low level of corruption, as pointed by Balogun (2003) and Anttiroiko (2014). The result stresses that individuals who admitted that they have inherited a high appetence towards hard and conscientious work, who are diligent and put a great emphasis on work ethic are at antipodes compared with those whose ordinary behaviour tends towards looking for the easy way, without work, sacrifice and effort, therefore having no rebukes of conscience paying bribes to achieve their petty purposes.

Quite particular, the only external influence (also negative) is exerted by the mothers' level of religiosity, i.e. those students who have religious mothers are more likely to prefer to avoid receiving bribes in different daily situations. This finding is in line with other previous studies that analyzed how parents transmit their religiousness to children and how religious households have a stimulating influence on children's empathy and sense of justice, the latter being even more punitive against bad habits (Decety *et al.*, 2015).

VARIABLE / MODEL	(1)	(2)	(3)	(4)	(2)	(9)	(1)	(8)	(6)	(10)	(11)
accept undeserved state fin adv	0.1418***			0.1167***	0.0955***	0.1172***	0.1164***	0.1163***	0.1175***	0.1159***	0.0982***
accept buying stolen goods	(0010.0)	0.1069***		(0.0974^{***})	0.0857***	0.0973***	0.0938***	(coro.0) 0.0983***	(0.1018^{***})	(coro.o)	0.0859***
clear_stimulating_effect_competition		(0.0139)	-0.1086***	(0.0134) -0.0873***	(0.0134) -0.0815***	(0.0134) - 0.0824^{***}	(0.0132) -0.0836***	(0.0132) -0.0840***	(0.0134) -0.0860***	(0.0133) - 0.0875^{***}	(0.0132) - 0.0680^{***}
accept notpaying public taxes			(0.0171)	(0.0177)	(0.0176) 0.0718^{***}	(0.0174)	(0.0178)	(0.0175)	(0.0177)	(0.0175)	(0.0175) 0.0687***
clear conviction state					(0.0152)						(0.0150)
involve economy						-0.0417** (0.0141)					-0.0385** (0.0142)
level interpersonal trust							-0.0209**				-0.0177*
inherited hard work							(0,00.0)	-0.0629***			-0.0511 ***
1								(0.0132)			(0.0136)
inherited altruism									-0.0565***		-0.0396**
									(0.0147)		(0.0149)
only mother faith God										-0.0357* (0.0150)	-0.0303* (0.0146)
Z	2137	2137	2137	2137	2137	2137	2136	2137	2137	2137	2136
chi^2	71.8618	60.5049	40.3700	135.3411	158.7284	135.9109	134.7726	143.6854	145.4974	135.3928	195.9697
d	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R^2	0.0406	0.0381	0.0231	0.0894	0.1040	0.0948	0.0923	0.1040	0.0995	0.0932	0.1341
Max.Abs.Val. for Correl.Coef. (Predictors' Correlation Matrices)	0.0000	0.0000	0.0000	0.1369	0.2256	0.1369	0.1334	0.1369	0.1369	0.1369	0.2233
AUC	0.5904	0.6206	0.5696	0.6899	0.7163	0.7075	0.7065	0.7168	0.7164	0.6996	0.7610
p GOF	0	0	0	0.1181	0.0823	0.0448	0.1217	0.0621	0.5193	0.1610	0.4221
chi^2 GOF	0.00	0.00	0.00	7.36	17.97	20.04	40.33	18.95	10.12	15.49	443.17
AIC	1479.8626	1483.7365	1506.7643	1408.8611	1388.3343	1402.4617	1402.3885	1388.2978	1395.2603	1404.9458	1348.3266
BIC	1491.1969	1495.0708	1518.0986	1431.5298	1416.6701	1430.7975	1430.7220	1416.6336	1423.5960	1433.2816	1404.9935
max P nomolog - bigger than	0.2000	0.1000	0	0.5000	0.5000	0.5000	0.6000	0.6000	0.5000	0.5000	0.7000
Source and Notes are the same a	as in Table 2										

VARIARI E / MODEL	(1)	(6)	(3)	W	(5)	(9)	E)	(8)	(0)
accent undeserved state fin adv	0.1874***		(0)	0.1398***	0.1139***	0.1383***	0.1371***	0.1122***	0.1136***
	(0.0245)			(0.0239)	(0.0246)	(0.0237)	(0.0241)	(0.0246)	(0.0244)
accept buying stolen goods		0.2721^{***}		0.2402 ***	0.2226^{***}	0.2426^{**}	0.2407***	0.2254***	0.2250^{***}
		(0.0206)		(0.0213)	(0.0218)	(0.0212)	(0.0213)	(0.0217)	(0.0217)
clear_stimulating_effect_competition			-0.1520***	-0.0868**	-0.0837**	-0.0708*	-0.0824**	-0.0668*	-0.0696*
			(0.0320)	(0.0316)	(0.0308)	(0.0327)	(0.0317)	(0.0318)	(0.0317)
accept_notpaying_public_taxes					0.1249^{***}			0.1192^{***}	0.1216^{***}
					(0.0246)			(0.0246)	(0.0246)
individual freedom factor progress						-0.0751**		-0.0672*	-0.0676*
1						(0.0284)		(0.0280)	(0.0280)
MoldInRo							-0.0531	-0.0344	
							(0.0374)	(0.0358)	
N	1073	1073	1073	1073	1073	1073	1073	1073	1073
chi^2	50.1318	113.2351	21.0398	140.0274	162.5797	136.3377	142.0066	160.4645	159.4594
d	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R^2	0.0409	0.0941	0.0162	0.1278	0.1475	0.1334	0.1295	0.1529	0.1522
Max.Abs.Val. for Correl.Coef.	0.0000	0.0000	0.0000	0.1479	0.2173	0.1868	0.1479	0.2173	0.2173
(Fredictors' Correlation Matrices) AIIC	0.6215	0.6791	0.5595	0.7363	0.7554	0.7429	0 7409	0.7620	0.7611
p GOF	0	0	0	0.8142	0.4217	0.0833	0.6711	0.1317	0.1964
chi^2 GOF	0.00	0.00	0.00	1.57	11.26	17.93	8.47	60.17	31.90
AIC	1205.0073	1138.3700	1235.9469	1100.1920	1077.5099	1095.1958	1100.1223	1074.7539	1073.6545
BIC	1214.9637	1148.3264	1245.9033	1120.1049	1102.4009	1120.0869	1125.0134	1109.6014	1103.5238
max P nomolog - bigger than	0.2000	0.3000	0.3000	0.5000	0.6000	0.6000	0.5000	0.6000	0.6000
Source and Notes are the same as in Ti	able 2.								

RM
from
students
of
responses
on
based
models
Logit
4
Table

The model for the students in economics from both universities from the Republic of Moldova (Table 4 and Figure 3) brings lesser influences, some of them quite particular. The attitude towards bribe payments is positively influenced by the willingness to purchase stolen goods, the possibility to receive undeserved financial benefits from the state, the preference to evade tax payments. The results regarding the preference to evade tax payments emphasize that those who are more likely to cheat on taxes, therefore evading them, are more predisposed to pay bribes, being in line with other research studies (Buehn and Schneider, 2012). Such an idea underlines the predilection of tax evaders to be further engaged in illegal and immoral activities and attitudes involving bribery.

The only negative factor is exerted by the certainty that individual freedom is a certain cause of progress. Colombatto (2003) emphasized that corruption, including bribe actions, is perceived as unethical and is condemned only if the individuals are fully aware of their liberty in a free-based human community.

Additionally, when performing a T-test on the subset corresponding to RM, we did not find statistically significant differences (the significance level or Alpha of 1% was considered) in the means of the two subgroups obtained when using the variable indicating respondents from RM but studying at universities in Romania (MoldInRo). Moreover, the results in Table 4 and A3 (Appendix section) confirm the findings from the test above (lack of significance for MoldInRo) and the fact that the country of origin with its specificities seems to count more. And this also applies if we consider, by comparison, the T-test on the entire data set using the variable indicating Romania as a country of origin (Ro).

The latter suggests statistically significant differences (the same significance level above) in the means of the two subgroups depending on Ro. Similarly, the Ttest using the variable indicating the former belonging to territory once under the occupation of the long-gone Habsburg Empire (fHEt) for the subset corresponding only to respondents from Romania also suggests statistically significant differences (the same significance level above) in the means of the two subgroups depending on fHEt. Moreover, when considering these last two division variables, namely Ro and fHEt, separately in other two regressions on the overall dataset, with the same outcome related to bribery acceptance, the average marginal effects at means suggest a more powerful negative effect (almost twice as large) in the case of the first one (Ro). These differences are explainable in terms of the specific features of each region. For instance, if considering the development contrasts between Romania and Moldova (RM), and even between Central and Western (CW-RO) vs. Southern and Eastern (SE-RO) regions of Romania, the dilution of the inclination to accept bribes as we move away from the southeast and head northwest seems natural. Moreover, Romania is officially part of the European Union since 2007 and it is therefore aligned with the policy and desideratum of this union while Moldova (a former component of the Soviet Union between 1940 and 1991) is not yet there although we speak the same language and share millennia of common history. Therefore, the differences between CW-RO and SE-RO fade when compared with the ones between Romania and Moldova and this is also reflected in the phenomenon of corruption.



Figure 3. Nomogram for assessing the bribery risk - respondents from RM

Source: Authors' representation

To sum up the individual scores for the influences in all three Zlotnik (2015) risk prediction nomograms above (Figures 1-3), we have drawn the perpendiculars (vertical dashed lines) to the score axis (X) and we have found that:

- the influence corresponding to the ethical issue related to the acceptance of buying stolen goods is more pronounced in the Eastern region (RM);
- the influence corresponding to the positive role of competition on human actions is the strongest among the individuals from the Western region (CW-RO);
- the influence associated with the acceptance of undeserved public financial advantages (favouritism) is also the highest in the Western part (CW-RO).

As a result of the same aforementioned aggregations, we get totals representing maximum high risks of bribe payments (approximately 80% in Figure 1, 80% in Figure 2, and 70% in Figure 3), based on fair-to-good classifiers (ROC values between 0.76 and 0.77 in Tables 3 and 4 - model11, and in Table 4 – model 9) for all three historical regions.

In terms of validation of hypotheses, H1 is confirmed by all three particular models, with the specification that for the students from CW-RO, only two variables are significant out of the total of the four considered. However, this validation is limited to young students in economics, because they are a particular category, being more adaptable and oriented towards extrinsic goals (Holland, 1985; Vansteenkiste *et al.*, 2008). Hypothesis H2 is partially validated, entirely for CW-RO, partially for SE-RO, and not at all for RM. Hypothesis H3 is partially confirmed, the most appropriate model for this hypothesis being the one corresponding to SE-RO. Finally, H4 is not confirmed at all in the case of students from RM, partially for CW-RO and fully for SE-RO.

When comparing these three subgroups, we additionally analyzed the marginal effects for different common influences. Consequently, we have found that the students from RM who accept the idea of buying stolen goods are more likely (more than 25 percentage points) to pay bribes than those who do not agree with this choice when the rest of the variables in the models have the least stimulating values for this phenomenon. Quite striking, in the case of the students whose residencies are inside CW-RO and SE-RO, these percentage points are below 5%, with the same observation related to the rest of the variables, as pointed above. We have also found that the role of competition as a factor in human progress is different across subgroups. Hence, in CW-RO and SE-RO, the students put a smaller emphasis on competition than their counterparts from RM (~6% and~3% vs. more than 10%) with the same observation above. Still, for the latter, the significance is lower. If they agree to engage in tax evasion behaviour, the probability to intend to pay bribes differs for the students from RM when compared to those from SE-RO, revealing a difference of over 12% (more than 15% vs. ~3%) with the same observation related to the rest of the variables, as mentioned above.

endogeneity for In terms of (suspected the variable accept buying stolen goods), we started from evidence in the literature (Sheley and Bailey, 1985), where we found an early emphasis on morality (moral appeal) and income. Consequently, we considered the level of income (income_level), the belief in God of both respondent's parents (both parents faith God), and a third variable indicating that the respondent considered the inherited values from parents significant and lasting (clear lasting inherited values). We assumed all these three as instruments, while the one corresponding to acceptance of buying stolen goods as endogenous. Apart from these instrument variables for endogeneity, we included two additional independent predictors as part of the three common influences already identified, namely accept_undeserved_state_fin_adv and clear_stimulating_ effect competition. Then we used both ivregress 2sls and ivreg2 on the overall dataset. The results for three types of post estimations in the case of ivregress 2sls indicated that the assumption above (suspicion of endogeneity) does not stand. The Durbin and Wu-Hausman tests of endogeneity (Davidson and MacKinnon, 1993) using estat endog in Stata have shown p values greater than 0.05 (p = 0.0687 for

Durbin and p = 0.0688 for Wu-Hausman). By that, they did not contradict the H0 hypothesis (here, the one that the tested variable is exogenous). An additional test called first-stage regression statistics (estat firststage in Stata) contradicted the H0 hypothesis. Here, H0 meant that instruments are weak – the Cragg-Donald (1993) Wald F statistic greater than all Stock-Yogo test critical values. The third test, namely Sargan (1958) and Basmann (1960) checked the overidentifying restrictions (estat overid in Stata). It generated large p values (>0.2), which did not contradict the H0 hypothesis, namely the one that our instruments are valid and the model is correctly specified. We confirmed these results when using a similar command (ivreg2) with easier use.

Conclusions

The paper analyzes the predictors of bribe payments for three distinct regions delineated by former historical borders, namely the Central and Western parts of current Romania (coded as CW-RO), the Southern and Eastern parts (as SE-RO), and the Republic of Moldova (as RM). Using survey data from students in economics from seven Romanian and Moldavian universities, collected between 2017 and 2018, we have identified different particular patterns for the corresponding subsets. The results are not discussed in causal terms due to the peculiarities of bribe intentions and the statistical methods used (OLS and logit regressions with corresponding nomograms providing an intuitive way to assess the corresponding bribery risks for all three specific regions). Moreover, they are limited to the chosen type of respondents, namely young students in economics, a more adaptable and goal-oriented category. This also means that, for punctual recommendations corresponding to other occupational profiles of respondents, we will need to reapply for this survey and perform additional tests.

In terms of theoretical contributions, to our knowledge, this research is the first one taking into account the split according to a long-gone historical border, therefore identifying specific influences on the propensity for bribe payments. Our results reveal interesting facts, amplifying the role of history and culture in explaining different behaviours. Moreover, they show that proximity to western and eastern civilizations counts for explaining consistent differences in the intensity of common influences as well as the nature of peculiar ones. Three main influences are common to all three regional models categories (from 4 to 11 or from 4 to 9), namely competition (negative sign and stronger for CW-RO), accepting undue advantages, and buying stolen goods (both positive and stronger for RM). Coupled with the fact that another influence corresponding to the permanent residence in the Republic of Moldova and studying in Romania (UAIC, UBB, ULBS, ASE, or USV) is not significant (RM models), this suggests the powerful roots of the Russian heritage in the case of RM. The latter also seems to be responsible for the communist imprint in the economy and society. The partially common influences, namely the tax evasion

behaviour (positive influence and applying for both SE-RO and RM, being stronger for RM) and the attitude towards the interventionist role of the state in the economy (negative influence and corresponding to both CW-RO and SE-RO, being stronger for CW-RO) suggest the same when it comes to the Russian heritage and also the powerful roots of the Habsburg heritage (for CW-RO). This conclusion also results when looking at the peculiarities of these three regional models categories. Therefore, in the case of students with residencies in CW-RO, the novelty is brought by the variable related to nepotism, which is underlined only in this model, students considering that such behaviour is motivating for bribe payments. This result is in line with Köbis *et al.* (2015), who demonstrated that perceived descriptive corruption norms in a society determine the propensity of an individual to engage in corrupt behaviour. Another particular feature is students' decision to become entrepreneurs after graduation, an idea that may indicate a positive prediction for corrupt behaviours. These two variables are in line with other previous research, hence our article emphasizes that students in economics residing in cities and villages inside CW-RO consider behaving in a corrupt way when public institutions are not meritocratic nor stimulating for engaging in free-market behaviours. The same subgroup of students is not willing to pay bribes when considering the active role of the state through its formal institutions in the economy when manifesting a democratic attitude and having responsibility as an inherited value.

The second group of students (SE-RO) discloses other ethical aspects, except for those that are part of the aforementioned triad (the incentive effect of competition and tax evasion behaviour), that accompany the decision for bribe payments. The attitude of not paying taxes is somehow related to a certain environment in which citizens are aware that the money collected by the state is distributed in a nontransparent way (Mungiu-Pippidi, 2017). The rest of the variables negatively influence such a potential decision. Therefore, those who put stress on the value of work ethic and altruism manifest low interpersonal trust, and those whose mothers are highly religious are then not inclined to accept the payment of bribes.

For the students from RM, there are several peculiarities. The first one is about the negative role played by the subjective value attributed to individual freedom as a factor of progress in society on the potential corrupt behaviour. The second one is quite striking and emphasizes less significance in the case of the third element of the common triad, namely the role of competition in stimulating individuals to be more diligent, productive, and/or innovative, compared to the previous two regional models. In this sense, it is obvious that the role of competition as a predictor of corrupt behaviour is much less important for this subgroup of students. This latter influence could be explained by the structural economic backwardness of RM compared to Romania. Thirdly, we have also identified two powerful stimulating variables related to tax evasion behaviours.

In terms of support actions, counter-measures, and stimulating or corrective policies, any decision-maker must continuously put a special emphasis on

competition, honesty, transparency, as well as on national and regional identity. In addition, state institutions need to be strengthened when it comes to law enforcement, promotion of honesty, meritocracy, investment in infrastructure for public services, and increased potential to provide incentives for competition, private initiative, productivity, and growth.

Acknowledgements: We thank all the students who participated in this study and all the staff of the faculties involved who helped us distribute the questionnaire and collect the responses: Elisabeta Jaba (UAIC), Alin Adrian Mihaila (UBB), Renate Doina Bratu (ULBS), Ovidiu-Aurel Ghiuță (USV), Monica Mihaela Roman (ASE), Ion Profir Pârțachi (ASEM), and Nelu Florea (USB).

References

- Abraham, J. and Pane, M.M. (2014), Corruptive tendencies, conscientiousness, and collectivism, *Procedia Social and Behavioral Sciences*, 153, pp. 132-147.
- Ajzen, I. (1985), From intentions to actions: a theory of planned behavior, in: Kuhl, J. and Beckmann, J. (eds.), *Action control. SSSP Springer Series in Social Psychology*, Berlin: Springer, pp. 11-39.
- Ajzen, I. (1991), The theory of planned behavior, *Organizational Behavior and Human* Decision Processes, 50(2), pp. 179-211.
- Amini, C. and Douarin, E. (2020), Corruption and life satisfaction in transition: is corruption a social norm in Eastern Europe?, *Social Indicators Research*, 151, pp. 723-766. <u>https://doi.org/10.1007/s11205-020-02389-6</u>
- Banerjee, R. (2016), Corruption, norm violation and decay in social capital, *Journal of Public Economics*, 137, pp. 14-27. <u>https://doi.org/10.1016/j.jpubeco.2016.03.007</u>
- Bank of Greece, Bulgarian National Bank, National Bank of Romania, Österreichische Nationalbank (2014), South-Eastern European Monetary and Economic Statistics from the Nineteenth Century to World War II, Athens, Sofia, Bucharest, Vienna, (retrieved from https://www.bankofgreece.gr/RelatedDocuments/SEEMHN%20Data %20Volume%202014.pdf)
- Barr, A. and Serra, D. (2010), Corruption and culture: an experimental analysis, *Journal of Public Economics*, 94(11-12), pp. 862-869. <u>https://doi.org/10.1016/j.jpubeco.2010.07.006</u>
- Basmann, R. (1960), On finite sample distributions of generalized classical linear identifiability test statistics, *Journal of the American Statistical Association*, 55(292), pp. 650–659.
- Beck, T., Clarke, G., Groff, A., Keefer, P. and Walsh, P. (2001), New tools in comparative political economy: the database of political institutions, *World Bank Economic Review*, 15(1), pp. 169-217.

- Becker, S.O., Boeckh, K., Heinz, C. and Woessmann, L. (2016), The empire is dead, long live the empire! Long-run persistence of trust and corruption in the bureaucracy, *The Economic Journal*, 126(590), pp. 40-74. <u>https://doi.org/10.1111/ecoj.12220</u>
- Bel, G. (2021), Beyond government size: Types of government intervention and corruption, *Regulation & Governance*. <u>https://doi.org/10.1111/rego.12399</u>
- Bertrand, M., Djankov, S., Hanna, R. and Mullainathan, S. (2005), Obtaining a driving license in India: an experimental approach to studying corruption, *The Quarterly Journal of Economics*, 122(4), pp. 1639-1676. https://doi.org/10.1162/qjec.2007.122.4.1639
- Buehn, A. and Schneider, F. (2012), Corruption and the shadow economy: like oil and vinegar, like water and fire?, *International Tax and Public Finance*, 19(1), pp. 172-194.
- Čábelková, I. and Hanousek, J. (2004), The power of negative thinking: corruption, perception and willingness to bribe in Ukraine, *Applied Economics*, 36(4), pp. 383-397.
- Cameron, L., Chaudhuri, A., Erkal, N. and Gangadharan, L. (2015), Propensities to engage in and punish corrupt behavior: experimental evidence from Australia, India, Indonesia and Singapore, *Journal of Public Economics*, 93(7-8), pp. 843-851.
- Colombatto, E. (2003), Why is corruption tolerated?, *The Review of Austrian Economics*, 16(4), pp. 363-379.
- Cragg, J.G. and Donald, S.G. (1993), Testing identifiability and specification in instrumental variables models, *Econometric Theory*, 9, pp. 222-240.
- Davidson, R. and MacKinnon, J.G. (1993), *Estimation and Inference in Econometrics*, New York: Oxford University Press.
- De Jong, E. and Bogmans, C. (2011), Does corruption discourage international trade?, *European Journal of Political Economy*, 27(2), pp. 385-398. <u>https://doi.org/10.1016/j.ejpoleco.2010.11.005</u>
- De Jong, G. and Van Ees, H. (2014), Firms and corruption, *European Management Review*, 11, pp. 187-190. <u>https://doi.org/10.1111/emre.12036</u>
- De Sousa, L. (2008), I don't bribe, I just pull strings: assessing the fluidity of social representations of corruption in Portuguese society, *Perspectives on European Politics and Society*, 9(1), pp. 8-23.
- Decety, J., Cowell, J.M., Lee, K., Mahasneh, R., Malcolm-Smith, S., Selcuk, B. and Zhou, X. (2015), The negative association between religiousness and children's altruism across the world, *Current Biology*, 25, pp. 2951-2955.
- Di Stefano, P. (2016), Understanding rescuing during the Rwandan genocide, *Peace Review*, 28(2), pp. 195-202. <u>https://doi.org/10.1080/10402659.2016.1166755</u>
- Drugov, M. (2010), Competition in bureaucracy and corruption, *Journal of Development Economics*, 92(2), pp. 107-114. <u>https://doi.org/10.1016/j.jdeveco.2009.02.004</u>

- Frank, B. and Schulze, G.G. (2000), Does economics make citizens corrupt?, Journal of Economic Behavior & Organization, 43(1), pp. 101-113. https://doi.org/10.1016/S0167-2681(00)00111-6
- Freund, R.J. and Wilson, W.J. (1998), *Regression analysis: statistical modeling of a response variable*, San Diego: Academic Press.
- Galperin, B.L., Enueme, C.F. and Dixon, D.P. (2020), Pay the bribe or take the high road: dilemma of a young female Tanzanian entrepreneur, *The CASE Journal*, 16(1), pp. 75-96. <u>https://doi.org/10.1108/TCJ-05-2018-0063</u>
- Georgieva, I. (2000), Using transparency against corruption in public procurement: a comparative analysis of the transparency rules and their failure to combat corruption, Cham: Springer.
- Ghura, H., Harraf, A., Li, X. and Hamdan, A. (2019), The moderating effect of corruption on the relationship between formal institutions and entrepreneurial activity, *Journal of Entrepreneurship in Emerging Economies*, 12(1), pp. 58-78. https://doi.org/10.1108/JEEE-03-2019-0032
- Gino, F., Shahar, A. and Ariely, D. (2013), Self-serving altruism? The lure of unethical actions that benefit others, *Journal of Economic Behavior & Organization*, 93, pp. 285-292. <u>https://doi.org/10.1016/j.jebo.2013.04.005</u>
- Gneezy, U., Imas, A. and Madarász, K. (2014), Conscience accounting: emotion dynamics and social behavior, *Management Science*, 60(11), pp. 2645-2658. <u>https://doi.org/10.1287/mnsc.2014.1942</u>
- Gorsira, M., Denkers, A. and Huisman, W. (2016), Both sides of the coin: motives for corruption among public officials and business employees, *Journal of Business Ethics*, 151(1), pp. 1-16. <u>https://doi.org/10.1007/s10551-016-3219-2</u>
- Hauk, E. and Saez-Marti, M. (2002), On the cultural transmission of corruption, *Journal of Economic Theory*, 107(2), pp. 311-335. <u>https://doi.org/10.1006/jeth.2001.2956</u>
- Heidenheimer, A.J. (2005), Perspectives on the perception of corruption, in: Heidenheimer, A.J. and Johnston, M. (eds.), *Political Corruption: Concepts and Contexts*, New Brunswick: Transaction Publishers, pp. 141-154.
- Heuer, A. and Liñán, F. (2013), Testing alternative measures of subjective norms in entrepreneurial intention models, *International Journal of Entrepreneurship and Small Business*, 19(1), pp. 35-50. <u>https://doi.org/10.1504/IJESB.2013.054310</u>
- Holland, J.L. (1985), *Making vocational choices: A theory of careers*, Englewood Cliffs, NJ: Prentice-Hall.
- Johnson, N.D., LaFountain, C. and Yamarik, S. (2013), Corruption is bad for growth (even in the United States), *Public Choice*, 147(3), pp. 377-393. <u>https://doi.org/10.1007/s11127-010-9634-5</u>
- Jong-Sung, Y. and Khagram, S. (2005), A comparative study of inequality and corruption, *American Sociological Review*, 70(1), pp. 136-157. <u>https://doi.org/10.1177/000312240507000107</u>

- Ko, K. and Samajdar, A. (2010), Evaluation of international corruption indexes: should we believe them or not?, *The Social Science Journal*, 47(3), pp. 508-540. <u>https://doi.org/10.1016/j.soscij.2010.03.001</u>
- Köbis, N.C., van Prooijen, F. J.-W., Righetti, F. and van Lange, P.A.M. (2015), "Who doesn't?"-The impact of descriptive norms on corruption, *PLoS One*, 10(6), p. e0131830.
- Logue, N.C. (2005), Cultural relativism or ethical imperialism? Dealing with bribery across cultures, CBFA Conference, New York, USA (retrieved from http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=CF81AAB33AAC3DE1C 4E7EFAC13417852?doi=10.1.1.662.9233&rep=rep1&type=pdf).
- Macdonald, R. and Majeed, M. (2019), Causes of corruption in European countries: history, law, and political stability (retrieved from https://www.gla.ac.uk/media/ media_218412_en.pdf).
- Madden, T., Scholder, P.E. and Ajzen, I. (1992), A comparison of the theory of planned behavior and the theory of reasoned action, *Personality and Social Psychology Bulletin*, 18(1), pp. 3-9.
- Malesky, E.J., Gueorguiev, D.D. and Jensen, N.M. (2015), Monopoly money: Foreign investment and bribery in Vietnam, a survey experiment, *American Journal of Political Science*, 59(2), pp. 419-439. <u>https://doi.org/10.1111/ajps.12126</u>
- Manzetti, L. and Wilson, C.J. (2007), Why do corrupt governments maintain public support?, *Comparative Political Studies*, 40(8), pp. 949-970. <u>https://doi.org/10.1177/0010414005285759</u>
- Markevich, A. (2019), A regional perspective on the economic development of the late *Russian Empire* (retrieved from https://ssrn.com/abstract=2555273).
- Mazar, N. and Aggarwal, P. (2011), Greasing the palm: can collectivism promote bribery?, *Psychological Science*, 22(7), pp. 843-848. https://doi.org/10.1177/0956797611412389
- Mishler, W. and Rose, R. (2001), What are the origins of political trust? Testing institutional and cultural theories in post-communist societies, *Comparative Political Studies*, 34(1), pp. 30-62. <u>https://doi.org/10.1177/0010414001034001002</u>
- Mocan, N., Bielen, S. and Marneffe, W. (2020), Quality of judicial institutions, crimes, misdemeanors, and dishonesty, *European Journal of Political Economy*, 61, p. 101815. <u>https://doi.org/10.1016/j.ejpoleco.2019.101815</u>
- Mukaka, M.M. (2012), A guide to appropriate use of correlation coefficient in medical research, *Malawi Medical Journal*, 24(3), pp. 69-71.
- Mungiu-Pippidi, A. (2016), The Quest for Good Governance, Iași: Polirom.
- Mungiu-Pippidi, A. and Dadašov, R. (2016), Measuring control of corruption by a new index of public integrity, *European Journal on Criminal Policy and Research*, 22(3), pp. 415-438. <u>https://doi.org/10.1007/s10610-016-9324-z</u>

- Muñoz-Izquierdo, N., de Liano, B.G.-G., Rin-Sanchez, F.D. and Pascual-Ezama, D. (2014), *Cheating and altruism by discipline*, MPRA Paper, 89579 (retrieved from https://mpra.ub.uni-muenchen.de/89579/1/MPRA_paper_89579.pdf).
- Nam, T. (2018), Examining the anti-corruption effect of e-government and the moderating effect of national culture: A cross-country study, *Government Information Quarterly*, 35(2), pp. 273-282. <u>https://doi.org/10.1016/j.giq.2018.01.005</u>
- Ramamoorthy, N., Kulkarni, S. and Gupta, A. (2015), To bribe or not to bribe?, Determinants in the Indian context, *European Management Review*, 12(4), pp. 247-259. <u>https://doi.org/10.1111/emre.12053</u>
- Reckers, P. and Samuelson, M. (2016), Toward resolving the debate surrounding slippery slope versus licensing behavior: the importance of individual differences in accounting ethical decision making, *Advances in Accounting*, 34, pp. 1-16. https://doi.org/10.1016/j.adiac.2016.07.003
- Rodríguez-Pose, A. and Maslauskaite, K. (2012) Can policy make us happier? Individual characteristics, socio-economic factors and life satisfaction in Central and Eastern Europe, *Cambridge Journal of Regions, Economy and Society*, 5(1), pp. 77-96. https://doi.org/10.1093/cjres/rsr038
- Rose-Ackerman, S. (1975), The economics of corruption, *Journal of Public Economics*, 4(2), pp. 187-203.
- Rose-Ackerman, S. (1999), Corruption and Government Causes, Consequences and Reform, Cambridge: Cambridge University Press.
- Ryvkin, D. and Serra, D. (2020), Corruption and competition among bureaucrats: An experimental study, *Journal of Economic Behavior & Organization*, 175, pp. 439-451. <u>https://doi.org/10.1016/j.jebo.2017.12.026</u>
- Sargan, J. (1958), The estimation of economic relationships using instrumental variables, *Econometrica*, 26(3), pp. 393–415.
- Schulze, M.S. (2007), Regional Income Dispersion and Market Potential in the Late Nineteenth Century Hapsburg Empire, Working Papers No. 106/07, Department of Economic History, London School of Economics, pp. 1-30.
- SEEMHN (2014), South-Eastern European Monetary and Economic Statistics from the Nineteenth Century to World War II, published by: Bank of Greece, Bulgarian National Bank, National Bank of Romania, Oesterreichische Nationalbank, Athens, Sofia, Bucharest, Vienna.
- Seligson, M.A. (2002), The impact of corruption on regime legitimacy: a comparative study of four Latin American countries, *The Journal of Politics*, 64(2), pp. 408-433. <u>https://doi.org/10.1111/1468-2508.00132</u>
- Sheley, J.F., Bailey, K.D. (1985), New directions for anti-theft policy: Reductions in stolen goods buyers, *Journal of criminal justice*, 13(5), pp. 399-415.
- Shen, H., Wan, F. and Wyer, Jr., R.S. (2011), Cross-cultural differences in the refusal to accept a small gift: the differential influence of reciprocity norms on Asians and North Americans, *Journal of Personality and Social Psychology*, 100(2), pp. 271-281. <u>https://doi.org/10.1037/a0021201</u>

- Stahl, C., Kassa, S. and Baez-Camargo, C. (2017), Drivers of petty corruption and anticorruption interventions in the developing world - a semi-systematic review (retrieved fromhttps://baselgovernance.org/sites/default/files/2019-01/earf literature review.pdf).
- Tangney, J.P., Stuewig, J. and Mashek, D. J. (2007), Moral emotions and moral behavior, *Annual Review of Psychology*, 58, pp. 345-372. <u>https://doi.org/10.1146/annurev.psych.56.091103.070145</u>
- Tanzi, V. (1994), Corruption, governmental activities, and markets, Working Paper 94/99, International Monetary Fund (retrieved from https://www.imf.org/en/Publications/ WP/Issues/2016/12/30/Corruption-Governmental-Activities-and-Markets-1912)
- Tavits, M. (2005), *Causes of corruption: testing competing hypotheses*, Working Paper, (retrieved from https://www.nuffield.ox.ac.uk/politics/papers/2005/tavits%20 nuffield%20wp.pdf).
- Tibshirani, R. (1996), Regression shrinkage and selection via the lasso, *Journal of the Royal Statistical Society Series B Method*, 58(1), pp. 267-288.
- Transparency International (2017), *Corruption Perception Index 2017*, (retrieved from https://www.transparency.org/news/feature/corruption_perceptions_index_2017).
- Transparency International (2017), *What is corruption?* (retrieved from https://www.transparency.org/what-iscorruption).
- Transparency International (2018), *Corruption Perception Index 2018*, (retrieved from https://www.transparency.org/cpi2018, accessed December, 9th, 2018.
- Tudor, A.T. and Matis, D. (2010), Options for a modern accounting system in 19(th) century Transylvania, *Transylvanian Review*, 19(1), pp. 47-59.
- Uslaner, E.M. and Bădescu, G. (2004), Honesty, trust and the legal norms in the transition democracy: why Bo Rothstein is better able to explain Sweden than Romania, in: Kornai, R. and Rose-Ackerman, S. (eds.), *Creating Social Trust in Post-Socialist Transition*, New York: Palgrave Macmillan, pp. 31-52.
- Vansteenkiste, M., Timmermans, T., Lens, W., Soenens, B. and Van den Broeck, A. (2008), Does extrinsic goal framing enhance extrinsic goal-oriented individuals' learning and performance? An experimental test of the match perspective versus self-determination theory, *Journal of Educational Psychology*, 100(2), pp. 387-397. <u>https://doi.org/10.1037/0022-0663.100.2.387</u>
- Vatcheva, K.P., Lee, M.J., McCormick, J.B. and Rahbar, M.H. (2016), Multi-collinearity in Regression Analyses Conducted in Epidemiologic Studies, *Epidemiology (Sunnyvale, Calif)*, 6(2), pp. 227. <u>https://doi.org/10.4172/2161-1165.1000227</u>
- Villoria, M., Van Ryzin, G.G. and Lavena, C.F. (2013), Social and political consequences of administrative corruption: a study of public perceptions in Spain, *Public Administration Review*, 73(1), pp. 85-94. <u>https://doi.org/10.1111/j.1540-6210.2012.02613.x</u>
- Woodberry, R.D. (2008), Pentecostalism and economic development, in: Imber, J.B. (ed.), Markets, morals, and religion, New Brunswick, NJ: Transaction Publishers, pp. 157-177.

- Yan, Y. and Qi, S. (2020), I know what I need: optimization of bribery, *Journal of Business Ethics*, pp. 1-22. https://doi.org/10.1007/s10551-020-04608-z
- Zaloznaya, M. (2014), The social psychology of corruption: why it does not exist and why it should, *Sociology Compass*, 8(2), pp. 187-202. <u>https://doi.org/10.1111/soc4.12120</u>
- Zhang, A. (2009), Corruption as a determinant of transaction governance structure, *Strategic Outsourcing: An International Journal*, 2(1), pp. 27-36. https://doi.org/10.1108/17538290910935873
- Zlotnik, A. and Abraira, V. (2015), A general-purpose nomogram generator for predictive logistic regression models, *Stata Journal*, 15(2), pp. 537-546. <u>https://doi.org/10.1177/1536867X1501500212</u>

Appendix

Table A. The variables and the corresponding questions for this study

VARIABLE	QUESTIONNAIRE ITEM	CODING
	Inherited and background characteristics	
inherited_hard_work	Have you inherited the hard work from your parents?	1-yes,0-no
inherited_good_manners	Have you inherited good manners from your parents?	1-yes,0-no
inherited_independence	Have you inherited independence from your parents?	1-yes,0-no
inherited_sense_responsibility	Have you inherited from the feeling of responsibility your parents?	1-yes,0-no
inherited_tolerance	Have you inherited tolerance from your parents?	1-yes,0-no
inherited_perseverance	Have you inherited perseverance from your parents?	1-yes,0-no
inherited_obedience	Have you inherited obedience from your parents?	1-yes,0-no
inherited_creativity_imaginati		
on	Have you inherited creativity and imagination from your parents?	1-yes,0-no
inherited_altruism	Have you inherited altruism from your parents?	1-yes,0-no
inherited_respect4elders	Have you inherited respect for the elders from your parents?	1-yes,0-no
inherited_respect4traditions	Have you inherited respect for traditions from your parents?	1-yes,0-no
clear_lasting_inherited_values	Will these inherited qualities and traits last?	1-yes,0-no
number_siblings	How many brothers (sisters) do you have? (from 0 to 9, 0 - no siblings and 9 - more than 8 siblings)	10-point Likert scale
	What is your household monthly income level? (1 -less than 1500 RON, 2 - 1500–2499, 7 - more than	
income_level	6500 RON)	7-point Likert scale
mother_education	What is your mother's highest level of education completed?	years total schooling
father_education	What is your father's highest level of education completed?	years total schooling
both_parents_private_sector	Have both of your parents worked or are currently working in the private sector?	1-yes,0-no
only_mom_private_sector	Only your mother has worked or is currently working in the private sector?	1-yes,0-no
only_father_private_sector	Only your father has worked or is currently working in the private sector?	1-yes,0-no
both_parents_faith_God	Do both your parents believe in God?	1-yes,0-no
only_mother_faith_God	Does only your mother believe in God?	1-yes,0-no
only_father_faith_God	Does only your father believe in God?	1-yes,0-no
both_parents_gone_abroad	Have both of your parents been abroad for more than a year?	1-yes,0-no
only_mother_gone_abroad	Only your mother has been abroad for more than a year?	1-yes,0-no
only_father_gone_abroad	Only your father has been abroad for more than a year?	1-yes,0-no
parental_severity	How strict were your parents? (from 1 to 10, 1 - very low level and 10 - very high level)	10-point Likert scale
urban	Are you coming from an urban residence environment?	1-yes,0-no

136 | Aurelian-Petrus PLOPEANU, Daniel HOMOCIANU

Ro	Permanent residence in Romania? (based on the indicated location of residence and corresponding coordinates)	1-yes,0-no
fHEt	Permanent residence in a place once under the occupation of the former Habsburg Empire? Also (based on the indicated location of residence and corresponding coordinates) Permanent residence in the Republic of Moldova and studying in Romania (UAIC UBB UI BS ASE or	1-yes,0-no
MoldInRo	USV)?	1-yes,0-no
	Individual characteristics	
male	What is your gender?	1-male,0-female
age	How old are you?	years
		between 5.00 and
avg_HSG	What is the average of your high-school grades? (from 5 to 10, with two decimal positions)	10.00
		between 5.00 and
avg_BG	What is the average of your baccalaureate grades? (from 5 to 10, with two decimal positions)	10.00
no_books_read_yearly	What is the number of books you read every year?	number of books
	In general, do you think most people can be trusted? (from 1 to 5, 1 - complete distrust and 5 - complete	
level_interpersonal_trust	trust)	5-point Likert scale
high_believe_in_God	Do you believe in God?	1-yes,0-no
trust_atLeast_one_institForm	Do you trust at least one Romanian institution?	1-yes,0-no
lab_success_source	Is labour an important source of success in life and society?	1-yes,0-no
ever_worked	Have you ever worked? (part-time / full-time job / volunteer)	1-yes,0-no
searching_job	Are you looking for a part-time and full-time job or to get involved as a volunteer?	1-yes,0-no
think_become_entrepreneur	Are you thinking of becoming an entrepreneur?	1-yes,0-no
only_strong_connections		-
_evolve_prof	Can you evolve professionally in your own country only based on favouritism?	1-yes,0-no
accept_undeserved_state_fin_		-
adv	Is it justifiable to receive from the state financial advantages that you would not deserve?	1-yes,0-no
accept_buying_stolen_goods	Is it justifiable to accept to buy a stolen good with the excuse that you can't afford a new one?	1-yes,0-no
accept notbuying public		•
_transp_tickets	Is it justifiable to avoid buying public transportation tickets?	1-yes,0-no
accept notpaying public taxe		•
s s s s s s s s s s s s s s s s s s s	Is it justifiable to avoid paying public taxes with the excuse that they are so high?	1-yes,0-no
accept pay bribes		•
(OUTCOME)	Is it justifiable to accept to pay bribes in certain situations?	1-yes,0-no
individual freedom factor		•
progress	Is individual freedom an important factor of progress?	1-yes,0-no
clear_stimulating_effect	1 10	•
_competition	Does competition stimulate people to be more diligent, productive, and/or innovative?	1-yes,0-no

clear_conviction_state_involv e _economy clear_conviction_state_create	Should the state involve more in the economy?	1-yes,0-no
s		l
prosperity	Does the state create prosperity for the members of society?	1-yes,0-no
clear_conviction_thrive_state		, , , , , , , , , , , , , , , , , , ,
_instit	Does a society thrive based on state institutions?	1-yes,0-no
clear_conviction_prog_taxatio		l
n		
_benef	Is progressive taxation beneficial to society?	1-yes,0-no
distrib state	Should public revenues he uniformly distributed to society by the state?	1 ves 0 no
clear conviction relig suppor	Should public revenues be uniformity distributed to society by the state?	1-yes,0-110
ted		1
state	Should a religious denomination be actively supported by the state?	1-yes,0-no
		, , , , , , , , , , , , , , , , , , ,
m		1
_welfare	Is individualism a factor of material welfare?	1-yes,0-no
clear_conviction_democracy_		l
best	Is democracy the best government form?	1-yes,0-no
clear_conviction_relig_infl		1 0
_ponucs	Should religion influence the politics of a country?	1-yes,0-no
Source: Autnors' projection	a.	

Table A1.OLS models based on responses of students from CW-RO

						-					
VARIABLE / MODEL	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	0.2150**			0.1844**	0.1820**	0.1831**	0.1880**	0.1825**	0.1850**	0.1786**	0.1773**
accept_undeserved_state_fin_adv	*			*	*	*	*	*	*	*	*
	(0.0358)			(0.0342)	(0.0342)	(0.0343)	(0.0342)	(0.0340)	(0.0344)	(0.0341)	(0.0340)
		0.1147**		0.0955**	0.0932**	0.0928**	0.0962**	0.0957**	0.0960**	0.0938**	0.0901**
accept buying stolen goods		*		*	*	*	*	*	*	*	*
1 - 7		(0.0213)		(0.0203)	(0.0202)	(0.0203)	(0.0204)	(0.0202)	(0.0203)	(0.0203)	(0.0200)
			-	-	-	-	-	-	-	-	-
clear_stimulating_effect_competit			0.1802**	0.1656**	0.1645**	0.1631**	0.1482**	0.1531**	0.1544**	0.1603**	0.1229**
ion			*	*	*	*	*	*	*	*	*
			(0.0277)	(0.0272)	(0.0272)	(0.0270)	(0.0267)	(0.0269)	(0.0271)	(0.0273)	(0.0265)
only_strong_connections_evolve					0.0378*						0.0418**

138 | Aurelian-Petrus PLOPEANU, Daniel HOMOCIANU

_prof					(0.0157)						(0.0156)
think_become_entrepreneur					(0.0157)	0.0444* (0.0197)					(0.0156) 0.0409* (0.0195)
clear_conviction_state_involve _economy							0.0766**				0.0682**
							(0.0188)				(0.0186)
clear_conviction_democracy_best								0.0501** * (0.0141)			-0.0429** (0.0140)
clear_conviction_thrive_state_ins tit									- 0.0484** *		-0.0360**
inherited sense responsibility									(0.0137)	-0.0596**	(0.0137) -0.0536*
1 _ ,	0.0954**	0.0902**	0.2691**	0.2183**	0.2054**	0.2080**	0.2605**	0.2344**	0.2306**	(0.0224) 0.2643**	(0.0217) 0.2963**
constant	*	*	*	*	*	*	*	*	*	*	*
	(0.0072)	(0.0075)	(0.0268)	(0.0268)	(0.0273)	(0.0267)	(0.0299)	(0.0274)	(0.0272)	(0.0322)	(0.0350)
N	1862	1862	1862	1862	1862	1862	1862	1862	1862	1862	1862
P R^2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1171
Max.Abs.Val. for Correl.Coef. (Predictors' Correlation Matrices)	0.0000	0.0000	0.0000	0.1144	0.1144	0.1144	0.1836	0.1787	0.1640	0.1144	0.1836
Max OLS computed VIF Max OLS acceptable VIF = $1/(1-$	1.0000	1.0000	1.0000	1.0184	1.0200	1.0189	1.0420	1.0385	1.0340	1.0243	1.0954
R^2)	1.0399	1.0226	1.0417	1.0966	1.1003	1.1003	1.1092	1.1037	1.1032	1.1024	1.1326
AIC	967.2684	998.4260 1009.484	963.9518	872.3997	868.0286	868.0848	853.1099	862.2910	863.0846	864.5063	824.1430
BIC	978.3273	8	975.0106	894.5173	895.6756	895.7319	880.7570	889.9381	890.7317	892.1533	879.4371

Source: Authors' calculations in Stata 16 MP for all specifications/scenarios/models with the progressive inclusion of those three common most important variables (core – first four models) and others (starting from model 5).

Notes: Robust standard errors in parentheses. *, **, *** indicate significance at 5%, 1% and 1‰. The coefficients are raw coefficients from regressions. Max OLS computed VIF < Max OLS acceptable VIF represents further evidence of the lack of collinearity in the models.

Table A2. OLS models	Dascu U	n respoi	1969 01 90	uuents n	om SE-1	ŇŬ					
VARIABLE / MODEL	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
accept_undeserved_state_fin_adv	0.2118***			0.1819***	0.1553***	0.1825***	0.1806***	0.1822***	0.1832***	0.1817***	0.1569***
	(0.0327)			(0.0316)	(0.0324)	(0.0315)	(0.0316)	(0.0314)	(0.0315)	(0.0315)	(0.0320)
accept_buying_stolen_goods		0.1252***		0.1154***	0.1023***	0.1152***	0.1119***	0.1166***	0.1194***	0.1154***	0.1038***
		(0.0182)		(0.0175)	(0.0175)	(0.0175)	(0.0174)	(0.0174)	(0.0175)	(0.0175)	(0.0172)
clear_stimulating_effect											
_competition			-0.1464***	-0.1206***	-0.1143***	-0.1154***	-0.1159***	-0.1175***	-0.1193***	-0.1201***	-0.1012***
			(0.0290)	(0.0284)	(0.0281)	(0.0280)	(0.0285)	(0.0281)	(0.0283)	(0.0283)	(0.0274)
accept_notpaying_public_taxes					0.0985***						0.0935***
					(0.0227)						(0.0226)
clear_conviction_state_involve											
_economy						-0.0457**					-0.0442**
						(0.0162)					(0.0161)
level_interpersonal_trust							-0.0217**				-0.0186*
							(0.0077)				(0.0076)
inherited_hard_work								-0.0669***			-0.0556***
								(0.0143)			(0.0146)
inherited_altruism									-0.0542***		-0.0395**
									(0.0132)	0.0245*	(0.0133)
only_mother_faith_God										-0.0345*	-0.0324*
	0.0050***	0.0024***	0.2469***	0.1747***	0.1572***	0.2020***	0.0042***	0.2125***	0.1020***	(0.0136)	(0.0134)
constant	0.0959***	0.0824***	0.2468***	0.1747***	0.15/3***	0.2038***	0.2243***	0.2125***	0.1920***	0.1855***	0.2827***
NT.	(0.0067)	(0.0070)	(0.0281)	(0.0280)	(0.0278)	(0.0309)	(0.0332)	(0.0294)	(0.0284)	(0.0284)	(0.0366)
N	2137	2137	2137	2137	2137	2137	2130	2137	2137	2137	2130
p DA2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
K'2 May Aha Val fan Camal Caaf	0.0385	0.0302	0.0204	0.0775	0.0905	0.0814	0.0789	0.0878	0.0841	0.0800	0.1103
(Dradiators' Correlation Matrices)	0.0000	0.0000	0.0000	0.1369	0.2256	0.1369	0.1334	0.1369	0.1369	0.1369	0.2233
(Fredictors Correlation Matrices)	1.0000	1 0000	1 0000	1.0242	1 0922	1.0258	1.0221	1.0242	1.0244	1.0242	1 0991
Max OLS computed VIF	1.0000	1.0000	1.0000	1.0242	1.0652	1.0238	1.0251	1.0242	1.0244	1.0242	1.0661
Max OLS acceptable VIF = $1/(1-K^2)$	1126 4650	1144 2529	1165 8000	1041 4747	1012 2270	1024 4200	1022 0752	1010 4224	1028 1006	1027 6006	1.1240
DIC DIC	1120.4030	1155 6971	1177 2252	1041.4/4/	1013.2279	1062 7667	1061 4087	1017.4234	1026.1900	1065 0454	1025 7522
DIC	1131.1993	1155.00/1	11/1.2232	1004.1433	1041.3037	1002.7007	1001.400/	1041.1372	1050.5204	1000.7404	1023.1323

Table A2. OLS models based on responses of students from SE-RO

Source and Notes are the same as in Table A1.

Table A3. OLS models based on responses of students from RM

VARIABLE / MODEL	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
accept_undeserved_state_fin_adv	0.1989***			0.1504***	0.1241***	0.1481***	0.1477***	0.1211***	0.1227***
	(0.0281)			(0.0272)	(0.0277)	(0.0270)	(0.0274)	(0.0277)	(0.0275)
accept_buying_stolen_goods		0.3186***		0.2849***	0.2660***	0.2867***	0.2854***	0.2688***	0.2681***
		(0.0299)		(0.0302)	(0.0305)	(0.0301)	(0.0302)	(0.0304)	(0.0304)
clear_stimulating_effect_competition			-0.1702***	-0.1029**	-0.0979**	-0.0861*	-0.0987**	-0.0799*	-0.0830*
			(0.0397)	(0.0375)	(0.0368)	(0.0384)	(0.0376)	(0.0379)	(0.0377)
accept_notpaying_public_taxes					0.1385***			0.1330***	0.1349***
					(0.0291)			(0.0291)	(0.0292)

140 | Aurelian-Petrus PLOPEANU, Daniel HOMOCIANU

individual_freedom_factor_progress						-0.0774*		-0.0690*	-0.0688*
						(0.0312)		(0.0310)	(0.0310)
MoldInRo							-0.0481	-0.0360	
							(0.0329)	(0.0323)	
constant	0.1897***	0.1646***	0.4124***	0.2007***	0.1637***	0.2451***	0.2053***	0.2084***	0.2043***
	(0.0155)	(0.0139)	(0.0370)	(0.0373)	(0.0370)	(0.0415)	(0.0375)	(0.0418)	(0.0415)
N	1073	1073	1073	1073	1073	1073	1073	1073	1073
р	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R^2	0.0483	0.1141	0.0202	0.1508	0.1717	0.1563	0.1523	0.1768	0.1760
Max.Abs.Val. for Correl.Coef. (Predictors' Correlation Matrices)	0.0000	0.0000	0.0000	0.1479	0.2173	0.1868	0.1479	0.2173	0.2173
Max OLS computed VIF	1.0000	1.0000	1.0000	1.0363	1.0711	1.0608	1.0365	1.0800	1.0747
Max OLS acceptable VIF = $1/(1-R^2)$	1.0508	1.1288	1.0207	1.1776	1.2073	1.1852	1.1796	1.2148	1.2136
AIC	1253.9675	1177.1437	1285.1765	1135.7200	1110.9771	1130.8095	1135.8471	1108.3109	1107.3888
BIC	1263.9239	1187.1001	1295.1329	1155.6328	1135.8681	1155.7005	1160.7382	1143.1584	1137.2581

Source and Notes are the same as in Table A1.

Online Appendix

Figure A-O1. GFT based distribution of responses filtered or not using the outcome variable (online at: https://ejes.uaic.ro/appendix/EJES2020_1201_PLO_A01.tiff, and https://y2u.be/iMer7KgWZoU)

Figure A-O2. GFT based representation of the polygon corresponding to territory once under the former occupation of the former Habsburg empire (online at: https://ejes.uaic.ro/appendix/EJES2020_1201_PLO_A02.tiff)

Figure A-O3. Short representation of the Point-in-Polygon technique used to determine responses inside the polygon above (online at: https://tinyurl.com/47sc9zsa, and https://ejes.uaic.ro/appendix/EJES2020_1201_PLO_A03.jpg)

Figure A-O4. Results of many data mining tests performed using the Naïve Bayes techniques (online at: https://ejes.uaic.ro/appendix/EJES2020_1201_PLO_A04.pdf)