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DIGITALNI AKADEMSKI ARHIVI I REPOZITORIJI

# CORRUPTION AND ECONOMY – PERCEPTIONS OF STUDENT POPULATION

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## **Abstract**

*The purpose of this study was to investigate the trust in institutions, perceptions, and attitudes related to corruption, as well as the connection between the levels of trust in institutions and perceived levels of corruptness in institutions, and the connection between participants' characteristics and corruption perceptions. We conducted a cross-sectional online survey from 14 January to 6 April 2021 on a sample of 111 University Department of Forensic sciences students. The questionnaire included general demographic data, trust in institutions, and the perception and attitudes related to corruption in Croatia. On average participants showed moderate trust in institutions and moderate levels of corruption in institutions. A negative correlation was found between the negative impact of corruption and trust in institutions, with a statistically significant relationship. Participants demonstrated relatively moderate levels of trust in institutions, as well as moderate levels of perceived corruption in various institutions. On average, the lowest levels of trust and highest levels of corruption were attributed to government and political parties. These findings can be attributed to transitional characteristics of Croatia's economy and democracy, as well as various corruption-related scandals in which Croatian politicians played a prominent role.*

**Keywords:** corruption, trust in institutions, perception of corruption, effects of corruption

**JEL classification:** I23, K49, E02, P20

## **Introduction**

Corruption is one of the most important problems of almost all national economies in the world because it distorts and complicates economic flows, causing damage of unimaginable proportions to companies, national economic systems, countries, international trade, and the world economy. Corruption has a multidimensional effect and is associated with many other social phenomena. The modern phenomenon of corruption is particularly complex, which requires continuous monitoring and study to prevent certain forms, protect against harmful consequences and punish immoral individuals or entire organizations and even legal entities as a whole. That is why one of the most important challenges for Croatia as a transition country is to achieve better integration into European society in the fight against corruption.

Fight against corruption needs to include thorough monitoring and research. Since corruption is a crime, collecting valid data and measuring it is very difficult. People experiencing corruption are reluctant to report it to authorities which leads to dark figures of crime. Various kinds of indirect assessments in corruption methodology and research can be employed to counter this phenomenon, such as perception-based indicators. Perception-based indicators can be researched on populations of experts, citizens, business representatives, etc., and rely on subjective opinions. Citizens can be an especially valuable source of different perception-based indicators of corruption such as the perception of the impact of corruption on the economy and society as a whole. A specific population of young adults who enter the labor market after college graduation could be an interesting sample to investigate these and other related perception-based indicators.

### **The impact of corruption on the economy - a review of previous research**

Over the past three decades, an increasing number of authors have investigated the cause-and-effect relationship of corruption with the national economy, education, health, public administration, defense, infrastructure quality, etc. Contemporary corruption research began with the work of Becker (1968) who linked corruption to certain economic categories as well as the research of Rose-Ackerman (1975) who observed the relationship between corruption and market structure.

The corruption phenomenon of rent-seeking was investigated by Baumol (1990) who, using a historical sequence of evidence, showed that rent-seeking negatively affects entrepreneurship and economic growth where the reward structure is directed against production and entrepreneurship. The negative impact of rent-seeking on economic growth was confirmed by Murphy et al. (1991) who upgraded Baumol's research using certain rates of return related to production and "rent-seeking" as well as empirical evidence obtained from data on the ratio of law students and engineers in the United States. Acemoglu (1995) realized that corruption and "rent-seeking" have an impact on the movement of certain economic resources towards non-productive activities and the income from rent-seeking is protected by corrupt civil servants. Cole and Chawdhry (2002) used data on the number of registered interest organizations to lobby in the state legislature and the density of interest organizations concerning the size of the national economy and also found a negative impact of rent-seeking on economic growth as well as an indirect negative effect on public investment and public services.

Tanzi and Davoodi (1997) found that high levels of corruption are associated with high public capital expenditures, and with lower levels of business activity and low maintenance costs. Bandeira et al. (2001) argued that corruption reduces capital productivity, effective human capital productivity, and overall factor productivity.

Mo (2001) in his research identified the negative impact of corruption on economic growth. Some other authors, such as Méndez and Sepúlveda (2006), believe that the negative impact of corruption on economic growth is most pronounced in "free" countries. In addition, they found that corruption harms economic growth in countries with highly developed institutional arrangements. Mauro (1995) concluded that corruption and other factors negatively affect Gross domestic product (GDP) per capita growth as well as investment and economic growth by examining data on corruption, political stability, the legal system, and public administration for a total of 68 countries over the period. from 1980-83. yr. Meon and Sekkat (2005) found that corruption has a significantly negative impact on GDP growth per capita, while the interaction

of corruption and poor rule of law, as well as the interaction of corruption and poor government efficiency, hurts the economic growth rate. On the other hand, Kaufmann, et al. (1999) in their research concluded that corruption hurts economic development. Guetat (2006) investigated the impact of corruption through investment and human capital in the countries of the Middle East and North Africa in the period 1960-2000 and found a significant negative impact of their poor institutional system on economic growth. Pellegrini and Gerlagh (2004) concluded that corruption hurts investment, education, business policy, and political stability, and this can then indirectly affect economic growth. Piplica and Čovo (2011) investigated the impact of corruption on economic growth in Croatia and ten European Union (EU) transition countries and identified the negative impact of corruption on economic growth where the strength of its impact is relatively obvious and takes place without significant delay.

Rock and Bonnett (2004) identified a specific occurrence in newly developed East Asian countries where economic growth is high despite high levels of corruption, which is recognized as an “East Asian paradox.” The authors explain its existence by specific patrimonial relations in terms of the protection-client network that exists with the resulting power structure between government patrons and civil society participants. Wei (1997) sought to explain the “East Asian Paradox” empirically and concluded that ethnic ties lead to higher flows of foreign direct investment, i.e., that informal institutions can be an important omitted variable that affects the nature of corruption.

Shleifer and Vishny (1993) investigated the transition period in Russia and the Philippines during the Marcos rule as well as in African countries and considered that corruption harms economic investment and thus on economic growth and development. The authors also concluded that corruption affects the direction of public investment from high-value projects to those that have useless social value.

Campos, et al. (1999) argued that countries with a higher level of corruption have a significantly lower investment rate. The authors concluded that a high level of corruption delays investment, but such a negative impact still declines with a higher level of predictability.

Lambsdorff (1998) investigated the market share of 19 large countries exporting their products and services to 86 markets, concluding that some countries such as the Netherlands and Sweden are reducing their market share in corrupt countries. In this regard, Hines (1995) showed the growth rate of US aircraft exports after 1977. was much lower in countries with high levels of corruption.

Alesina and Weder (2002) found that corruption affects the quality of public infrastructure, directs government spending toward the military, and lowers government spending toward education and health. Exploring 49 Latin American countries as well as Organisation for Economic Co-operation and Development (OECD) countries and some Eastern European countries Johnson, et al. (1997) concluded that countries with a higher degree of corruption have a higher share of the gray economy. Friedman et al (2000) also concluded that corruption affects the growth of the gray economy.

Mauro (1998) concludes that corruption affects the reduction of government spending on education. Furthermore, Gupta, et al. (2002) found that there is a significant impact of corruption on child mortality as well as on increasing drop-out rates in primary schools. Kaufmann, et al. (1999) also confirmed that corruption significantly affects child mortality and also realized that corruption significantly negatively affects adult literacy.

Herzfeld and Weiss (2003) concluded that corruption has a strong negative impact on the rule of law and that there are weak political institutions and a weaker judiciary in such environments. Some authors have focused their research on the cause-and-effect links of corruption with increasing poverty in society as well as income inequality. Thus, for example, Foellmi and Oechslin (2003) found that corruption increased the share of wealthier sections of society in total income.

Altbach (2005) found that the increase in corruption in higher education in the countries of Southeast Europe is partly the result of the commercialization and market sale of education. Mauro (1998) further concluded that corruption affects the growth of education costs, while Li et al. (2000) showed a negative effect of corruption on employee reward.

Several authors have also investigated the impact of corruption on inflation. Al-Marhubi (2000) investigated the impact of corruption on inflation in some countries in the period from 1980 to 1995, including data on GDP per capita, market openness, central bank independence (TOR), etc. The author found that corruption strongly influences the increase in inflation and that reducing corruption by one point also reduces the logarithm of the average annual inflation by 0.17 - 0.26%. By researching the impact of corruption on inflation in transition countries, Honlonkou (2003) concluded that corruption strongly influences changes in consumer prices. In a study conducted on a sample of 65 countries, Bahmani-Oskooee and Nasir (2002) found that a higher degree of corruption affects the depreciation of the domestic currency against foreign currencies, which in turn can affect international trade. Exploring the impact of corruption on inflation in transition EU member states, Piplica (2011) found its positive but weak impact.

Empirical research on the relationship between corruption and investment was conducted at the micro and macro levels. Smarzynska Javorcik and Wei (2002) analyzed data at the enterprise level and showed that corruption acts as a tax on foreign investors and reduces FDI in individual countries. Likewise, the authors showed that corruption affects the change of ownership structure in joint ventures. Campos et al., (1999) also investigated the impact of corruption at the enterprise level and concluded that it increases operating costs, creates uncertainty, and which ultimately hinders investment. Using enterprise-level data, Batra et al. (2003) and Gaviria (2002) came to opposite results. Namely, Batra et al. (2003) surveyed 3,100 companies from as many as 81 countries and concluded that corruption has a significant negative impact on investment. Gaviria (2002), on the other hand, researched data from 2,612 companies from 29 Latin American and Caribbean countries and concluded that there is no significant link between corruption and investment. Hellman et al. (2002) believe that companies that benefit from corruption can expand their activities by increasing investment.

## **Methods**

### ***Participants and setting***

We conducted a cross-sectional online questionnaire from 14 January to 6 April 2021 on 111 University Department of Forensic Sciences first and second-year graduate students (55,9% female, mean age = 32.8 ± 7.11). The questionnaire was disseminated to participants via their institutional e-mail.

### *Survey questionnaire*

The questionnaire included the following sections: (1) information of the study and informed consent, (2) general demographic data, (3) trust in institutions, and (4) the perception and attitudes related to corruption in Croatia.

The general and demographic questions included gender, age, employment status, job satisfaction, number of persons living in a shared household, income, relationship status, religiosity, and spirituality.

In the third section, participants were asked to report the level of trust in various institutions and sectors (city/municipality, government/political parties, media, office for the suppression of organized crime and corruption, non-governmental organizations, religious organizations, state prosecutor's office, entrepreneurship, customs, education, health care, judiciary, market inspection, and police). The level of trust was estimated on a scale from one (not having trust at all) to four (having complete trust).

In the fourth section, the participants were asked to describe their associations to the word corruption. The participants were also asked about the biggest problem in Croatia at the moment, and the main cause of corruption in Croatia. They were also asked to report the perceived level of corruption in the public and private sector, in the same set of institutions and sectors they were asked to report trust in (city/municipality, government / political parties, media, office for the suppression of organized crime and corruption, non-governmental organizations, religious organizations, state prosecutor's office, entrepreneurship, customs, education, health care, judiciary, market inspection, and police), and to determine how corrupt they felt they are at the individual level. The level of corruption was estimated from zero (no corruption at all) to ten (a lot of corruption) and from zero (I am not corrupted at all) to ten (I am very corrupted). To measure the attitudes regarding the effects of corruption on different life aspects and processes (employment possibilities, health care services availability, education process, administration services, life standard quality, legal sanctions implementation, obtaining permits, foreign investments, and small business) we constructed a five-point Likert scale for agreement (1 = strongly disagree; to 5 = strongly agree) with 9 statements.

The survey was approved by the University Department of Forensic Sciences Ethics Committee on 22 April 2020 (2181-227- 05-12-21-0001; 641-01/21-01/00003) and was in the Croatian language. At the beginning of the survey, the participants were introduced to the topic of the research, the principle of anonymity, and the intention of researchers to use the collected data only for scientific purposes (data analysis and publication). Participants were also asked to indicate if they consent to participate in the study.

### *Statistical analysis*

Categorical variables are given as frequencies and percentages. For the remaining variables, we provided the mean values with 95% CIs. Differences in categorical variables were examined using the Chi-squared test with the assumption that each category needs to have a similar number of respondents, while the differences in participants' responses were examined using an independent-samples t-test. For the correlations within and between sets of continuous

variables, we used the bivariate Pearson Correlation. For data processing, we used the IBM SPSS Statistics 20 statistical program.

## Results

The majority of participants were employed (68.8%) and 67.8% of them were either satisfied or very satisfied with their job (67.8%). Most of the participants described their household income as average (85.7%), and 36.6% of the participants reported living in a household of four people. Regarding their relationship status, more than half of the participants reported being married or in a relationship (79.4%). The greater number of participants described themselves as religious and/or spiritual persons (96%), and the majority of them reported being Catholic (92.9%). No statistically significant differences were found for the sex of participants on any of the measurements ( $p > 0.05$ ).

On average participants showed moderate trust in institutions with a total score of 32.62 out of a maximum of 56 (95% CI 31.20 – 34.04). The institutions with the highest level of trust were education, police, and health care, while the lowest reported levels of trust were for government/political parties, media, and non-governmental organizations (Table 1).

*Table 1: Trust in institutions*

<b>Trust in institutions</b>	<b>mean (CI 95%)</b>
City/municipality	2.22 (2.06 – 2.37)
Government/political parties	1.71 (1.56 – 1.86)
Media	1.81 (1.66 – 1.96)
Office for the suppression of organized crime and corruption	2.47 (2.29 – 2.64)
Non-governmental organizations	2.05 (1.89 – 2.22)
Religious organizations	2.34 (2.16 – 2.52)
State prosecutor's office	2.23 (2.06 – 2.40)
Entrepreneurship	2.44 (2.29 – 2.59)
Customs	2.57 (2.43 – 2.70)
Education	2.95 (2.84 – 2.06)
Health care	2.77 (2.63 – 2.90)
Judiciary	2.12 (1.96 – 2.28)
Market inspection	2.17 (2.03 – 2.32)
Police	2.77 (2.63 – 2.92)

Participants perceived slightly higher levels of corruption in the public sector with a total score of 7.80 out of a maximum of 10 (95% CI 7.44–8.16) than in the private sector with a total score of 7.00 out of a maximum of 10 (95% CI 6.57–7.43) since there was a statistically significant difference in the scores for the perception of levels of corruption in the public sector ( $M = 7.80$ ,  $SD = 1.92$ ) and in the private sector ( $M = 7.00$ ,  $SD = 2.28$ );  $t(110) = 4.32$ ,  $p < 0.001$ .

On average participants perceived moderate levels of corruption in institutions with a total score of 88.73 out of a maximum of 140 (95% CI 82.48 – 95.00). The highest levels of corruption were perceived in government/political parties, judiciary, and city/municipality, while the lowest levels of corruption were reported in religious organizations, education, and the office for the suppression of organized crime and corruption (Table 2).

*Table 2: Perception of the prevalence of corruption in institutions*

<b>Perception of the prevalence of corruption in institutions</b>	<b>mean (CI 95%)</b>
City/municipality	7.15 (6.66 – 7.65)
Government/political parties	7.87 (7.35 – 8.39)
Media	6.72 (6.20 – 7.24)
Office for the suppression of organized crime and corruption	5.23 (4.65 – 5.81)
Non-governmental organizations	6.08 (5.54 – 6.61)
Religious organizations	4.90 (4.30 – 5.50)
State prosecutor's office	6.25 (5.69 – 6.82)
Entrepreneurship	6.20 (5.66 – 6.75)
Customs	6.36 (5.88 – 6.85)
Education	5.21 (4.73 – 5.69)
Health care	6.72 (6.24 – 7.21)
Judiciary	7.19 (6.67 – 7.71)
Market inspection	6.97 (6.48 – 7.46)
Police	5.86 (5.30 – 6.41)

Regarding the level of their corruption, the participants on average assessed themselves as moderately corrupt with a total score of 5.62 (95% CI 4.83 – 6.42) out of a maximum of 10.

In open ended question 34.38% of the participants associated corruption with politics, government, political parties, and politicians (n = 22), 15.63% of participants associated the corruption with various government institutions (n = 10), 14.06% with crime, fraud, and theft (n = 9), 14.06% with bad people, and bad morals (n = 9), 7.81% associated corruption with Croatia, their reality, and their surroundings (n = 5), 7.81% with injustice, and inequality (n = 5), and 6.25% participants associated corruption with money (n = 4).

The current economic situation was considered to be the biggest problem in Croatia for 41.1% of the participants, while 31.2% of participants think Croatia's biggest problem is corruption. The participants regard the non-implementation of existing legal provisions (36.6%), lack of control mechanism (22.3%), Croatian culture/education (15.2%), and lack of transparency (11.6%) as the main causes of corruption in Croatia.

Internal consistency of the negative impact of corruption measurement (Cronbach alpha) was 0.92 which indicates a high level of internal consistency for our scale with this specific sample. On average participants perceived highly negative impacts of corruption on various life aspects and outcomes (total score of 37.87 (95% CI 36.56 – 39.18) out of maximum 45). Participants reported the most negative impacts of corruption on employment possibilities, life standard quality, and legal sanctions implementation (Table 3).

*Table 3: The negative impact of corruption*

<b>Negative impact of corruption</b>	<b>mean (CI 95%)</b>
Employment possibilities	4.54 (4.40 – 4.68)
Health care services availability	4.09 (3.90 – 7.70)
Education process	3.83 (3.60 – 4.06)
Administration services	4.14 (3.97 – 4.32)
Life standard quality	4.40 (4.22 – 4.57)
Legal sanctions implementation	4.38 (4.21 – 4.55)
Obtaining permits	4.13 (3.94 – 4.31)



<b>Negative impact of corruption</b>	<b>mean (CI 95%)</b>
Foreign investments	4.10 (3.88 – 4.32)
Small business	4.27 (4.09 – 4.45)

A negative correlation was found between religiosity / spirituality and trust in institutions ( $r = -0.32$ ,  $n = 111$ ) and the relationship was statistically significant ( $p = 0.001$ ). There was a negative correlation for trust in institutions and perception of prevalence of corruption in institutions ( $r = -0.36$ ,  $n = 111$ ), and the relationship was statistically significant ( $p < 0.001$ ). A positive correlation was found between negative impact of corruption and corruption in institutions ( $r = 0.47$ ,  $n = 111$ ), with a statistically significant relationship ( $p < 0.001$ ). A negative correlation was found between negative impact of corruption and trust in institutions ( $r = -0.21$ ,  $n = 111$ ), with a statistically significant relationship ( $p < 0.001$ ) (Table 4).

Table 4: Correlations between measurements

		<b>Job satisfaction</b>	<b>Religiosity / spirituality</b>	<b>Trust in institutions</b>	<b>Corruption in institutions</b>	<b>Negative impact of corruption</b>
<b>Job satisfaction</b>	Pearson correlation	1	-0.061	0.064	0.039	0.099
	p		0.562	0.544	0.712	0.347
<b>Religiosity / spirituality</b>	Pearson correlation	-0.061	1	-0.324***	0.154	0.119
	p	0.562		0.001	0.106	0.215
<b>Trust in institutions</b>	Pearson correlation	0.064	-0.324***	1	-0.364***	-0.291***
	p	0.544	0.001		0.000	0.002
<b>Corruption in institutions</b>	Pearson correlation	-0.055	0.154	-.364***	1	0.471***
	p	0.601	0.106	0.000		0.000
<b>Negative impact of corruption</b>	Pearson correlation	0.099	0.119	-0.291***	0.471***	1
	p	0.347	0.215	0.002	.000	

## Discussion

The participants in this study reported moderate trust in institutions, as well as moderate levels of corruption in various institutions. The participant's perception of high levels of corruptness was related to low levels of trust in institutions. The participants perceived higher levels of corruption in the public than the private sector and on average regarded themselves as moderately corrupt. They also indicated that corruption has highly negative effects on various aspects of life and regarded corruption as one of the biggest problems in Croatia.

The results of the present study show moderate trust in institutions with the highest trust in education, police, and health care, and the lowest levels of trust in government / political parties. On the other hand, the study conducted on a Russian national sample found that 80% of participants didn't trust the police, and 77% of them didn't trust members of parliament or political parties (Rose & Mishler, 2010). In Bosnia and Herzegovina, the educational institutions and the police are the most trusted institutions, followed by health care institutions, and non-governmental organizations (Krtalić, 2017). Štulhofer (2004) investigated the trust in various institutions (the church, the army, the legal system, the press, television, trade unions,

the police, political parties, government, parliament, the European Union, and the United Nations) in Croatia and measured how the levels of trust changed with time. The measured level of trust in institutions was also moderate but statistically significantly dropped from 1997 to 2003. Šporer & Sekulić (2011) also investigated trust in institutions in Croatia and measured the levels of trust at two points. It is important to note that the institutions in which the smallest percentage of participants had trust in 2004 as well as in 2010 were the Government, political parties, and the Parliament.

The results of this study indicate the participant's perception of slightly higher levels of corruption in the public than in the private sector. Baldock (2015) measured the perception of corruption across Europe, the Middle East, and Africa and found that 21 out of 28 participants selected the government/public sector while seven participants (all of them from Europe) selected the private sector. Bailey & Paras (2006) conducted their research on the Mexican population. The participants were asked about their perception of corruption in both private and public sectors, and in general, viewed the public sector to be more corrupt. Melgar, Rossi, and Smith (2010) asked the participants to indicate how widespread they think corruption is in the public sector, and 11.39% of them answered with "almost everyone" while 25.92% of them selected the "a lot of people" option. In their paper from 2010 Rose and Mishler present the results which indicate that five-sixths of Russians perceive most public officials as corrupt, with 35% of them choosing the "almost all" and 51% of them choosing the "most of them" option. In Štulhofer's research (2004) the Croatian participants were asked about the extent of corruption among civil servants. In 1995 60.5% of participants answered with "most are involved", and 14.75% chose the "almost all are involved" option, while in 2003 53.8% of them picked the "most are involved", and 23.4% of the participants answered with "almost all are involved". The perception of higher levels of corruption in the public sector in Croatia is not unexpected. Generally, there are more investments in the public than in the private sector, and there is a prevalent perception of rigged tenders and nepotism. Because of the transitional characteristics of the Croatian economy, the private sector is still somewhat underdeveloped and thus less scrutinized in the eye of the public, which could explain the difference in perception of corruption when compared to results from Western Europe.

In this study, the participants on average perceived moderate levels of corruption in institutions. The highest levels of corruption were perceived in government / political parties, judiciary, and city/municipality, while the lowest levels of corruption were reported in religious organizations, education, and the office for the suppression of organized crime and corruption. Research conducted on the Russian sample shows that participants regard the police as most corrupt, followed by hospitals and doctors, education, and military service, while they perceived social security to be least corrupt (Rose and Mishler, 2010). In Mexico, the participants perceived jails and different types of police to be the most corrupt institutions, and religious institutions are seen as the least corrupt institutions. Furthermore, politicians, policymakers, and congressmen are perceived as the most corrupt individuals while reporters, teachers, and priests are seen as the least corrupt persons (Bailey and Paras, 2006). The perception of high levels of corruption in government and political parties can also be attributed to Croatia being a transition country. Generally, the transition countries are characterized by higher party clientelism and corruption than in the "old" democracies (Ravlić, 2010). These results can also be partially explained by political corruption scandals and the wave of arrests connected to the government of former Prime Minister Ivo Sanader (Šporer and Sekulić, 2011).

The participants in the present study on average assessed themselves as moderately corrupt. These results are also not unexpected since Miličević in his 2009 paper states that in the Balkans

corruption is ingrained as an everyday occurrence, something expected, normal and logical and further explains that the ordinary citizens view it as a means to an end, a way of solving problems and a way of surviving without even realizing it. In the Mexican national study, more than half of them regarded themselves as “at least somewhat corrupt” (52%), while 45% of them perceived themselves as “clean” (Bailey and Paras, 2006).

In this study, most of the participants associated corruption with politics, government, political parties, and politicians followed by various government institutions, crime, fraud, theft, bad people, and bad morals. Since the participants believe that corruption is very common in the Croatian government and political parties these associations are also somewhat expected. In the study by Bailey and Paras (2006) participants were asked “what is corruption”. Most of them answered with “bribes”, followed by “citizens being dishonest”, “delinquency”, “authorities being dishonest”, “bad government”, “no application of the law”, and “politicians”.

The participants in this study considered the current economic situation to be the biggest problem in Croatia, while almost a third of them considered corruption to be Croatia’s biggest problem. The Mexican population considered corruption to be the biggest problem in their country, followed by public safety and poverty (Bailey and Paras, 2006). The participants in the present study regard the non-implementation of existing legal provisions, lack of control mechanism, Croatian culture/education, and lack of transparency respectively to be the main causes of corruption in Croatia while the participants in the study by Bailey and Paras (2006) considered lack of application of the law, culture/education of Mexicans and necessity respectively to be the main causes of corruption in Mexico.

The results of this study suggest that participants on average perceived highly negative impacts of corruption on various life aspects and outcomes. Participants reported the most negative impacts of corruption on employment possibilities, life standard quality, and legal sanctions implementation. In the study by Baldock (2015) the participants were also asked to assess the degree of effect of corruption on various categories. Most of the respondents stated that corruption had a “major effect” on “government efficiency”, “a nation’s development”, “political/legal life”, “economic/trade activity” and “society’s ruling values/ethics” while some of them thought it had a “major effect” on “education/profession”.

In this research, no significant differences in perception of corruption levels were found regarding participants’ gender, age, religiosity, employment status, and marital status. These findings may be such because the study was conducted on a sample of forensic science students and would probably differ if the sample was comprised of the general Croatian population. On the other hand, Melgar, Rossi, and Smith (2010) conducted cross-country research and found a significant gender difference with women being more likely to perceive a higher level of corruption than men. They also found a difference regarding marital status with married participants perceiving lower levels of corruption, and a difference regarding employment status with unemployed participants perceiving higher levels of corruption than those who are employed. They found no significant differences between religious participants and atheist participants.

In the present research, we detected a negative correlation between trust in institutions and perception of the prevalence of corruption in institutions. Similarly, in the paper by Melgar, Rossi, and Smith (2010) a negative relationship between trust in institutions and corruption was found. The participants from countries with low average perceptions of corruption reported higher trust in institutions. The participants from Scandinavian countries reported the highest

levels of trust in institutions and the lowest corruption perceptions. The researchers also note that there were some participants from countries with low levels of corruption perceptions and low levels of trust, especially from Latin American and Caribbean countries.

The major drawback of this study is the selection of the population sample and the limited sample size. Since this research has only been conducted on a convenient sample of forensic science students, the results cannot fully represent the views of the general student population and are not directly comparable to studies conducted on national or trans-national samples. Nevertheless, this graduate study program is attended by students of different previous educational backgrounds who further specialize in interdisciplinary, but mutually different scientific and practical fields. Considering their variabilities in age and work experience they could comprise a wider student population structure than an average study program at the University. Although the population of Forensic Science students is relatively heterogeneous in some socio-demographic categories it still makes a very small sample which can explain the lack of significant differences in their attitudes and perceptions. To gain further insight into corruption attitudes that could contribute to corruption prevention, future research should be conducted on a national Croatian sample.

## References

- Acemoglu, D. (1995). Reward structures and the allocation of talent. *European Economic Review*, 39(1), 17-33. Available at: [https://doi.org/10.1016/0014-2921\(94\)00014-Q](https://doi.org/10.1016/0014-2921(94)00014-Q).
- Altbach, P. (2005). Academic corruption: The continuing challenge. *International Higher Education*, (38) 5-6. Available at: <https://doi.org/10.6017/ihe.2005.38.7454>.
- Alesina, A., & Weder, B. (2002). Do corrupt governments receive less foreign aid?. *American Economic Review*, 92(4), 1126-1137. Available at: 92(4): 1126-1137. 10.1257/00028280260344669.
- Al-Marhubi, F. A. (2000). Corruption and inflation. *Economics Letters*, 66(2), 199-202.
- Bahmani-Oskooee, M., & Nasir, A. B. M. (2002). Corruption, law and order, bureaucracy, and real exchange rate. *Economic Development and Cultural Change*, 50(4), 1021-1028.
- Bailey, J., & Paras, P. (2006). Perceptions and attitudes about corruption and democracy in Mexico. *Mexican Studies/Estudios Mexicanos*, 22(1), 57-82. Available at: <https://doi.org/10.1525/msem.2006.22.1.57>.
- Baldock, G. (2015). The perception of corruption across Europe, Middle East and Africa. *Journal of Financial Crime*, 23(1), 119-131. Available at: <https://doi.org/10.1108/JFC-02-2015-0004>
- Bandeira, A. C., Garcia, F., & Silva, M. F. G. D. (2001). How does corruption hurt growth? Evidences about the effects of corruption on factors productivity and per capita income. Available at: <https://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/1953/TD103.pdf?sequence=1>.
- Batra, G., Kaufmann, D., & Stone, A. H. (2003). Investment climate around the world: Voices of the firms from the World Business Environment Survey. World Bank Publications.
- Baumol, W. J. (1996). Entrepreneurship: Productive, unproductive, and destructive. *Journal of business venturing*, 11(1), 3-22. Available at: [https://doi.org/10.1016/0883-9026\(94\)00014-X](https://doi.org/10.1016/0883-9026(94)00014-X).
- Becker, G. S. (1968). Crime and punishment: An economic approach. In *The economic dimensions of crime* (pp. 13-68). Palgrave Macmillan, London.
- Campos, E. J., Lien D., & Pradhan S. (1999). The Impact of Corruption on Investment: Predictability Matters. *World Development* 27(6): 1059-1067.
- Cole, I.M. & Chawdhry, M. A. (2002). Rent-Seeking and Economic Growth: Evidence from a Panel of U.S.States. *Cato Journal*, *Cato Institute* 22(2): 211-228.
- Foellmi, R., & Oechslin, M. (2007). Who gains from non-collusive corruption?. *Journal of development Economics*, 82(1), 95-119. Available at: <https://doi.org/10.1016/j.jdeveco.2005.10.002>.
- Friedman, E., Johnson, S., Kaufmann, D., & Zoido-Lobaton, P. (2000). Dodging the grabbing hand: the determinants of unofficial activity in 69 countries. *Journal of public economics*, 76(3), 459-493. Available at: [https://doi.org/10.1016/S0047-2727\(99\)00093-6](https://doi.org/10.1016/S0047-2727(99)00093-6).
- Gaviria, A. (2002). Assessing the effects of corruption and crime on firm performance: Evidence from Latin America. *Emerging Markets Review*, 3(3), 245-268. Available at: [https://doi.org/10.1016/S1566-0141\(02\)00024-9](https://doi.org/10.1016/S1566-0141(02)00024-9).

- Guetat, I. (2006). The effects of corruption on growth performance of the MENA countries. *Journal of Economics and Finance*, 30(2), 208-221. Available at: 10.1007/BF02761487.
- Gupta, S., Davoodi, H. R., & Tiongson, E. (2000). Corruption and the provision of health care and education services.
- Gutmann, J., & Lucas, V. (2018). Private-sector corruption: Measurement and cultural origins. *Social Indicators Research*, 138(2), 747-770. Available at: 10.1007/s11205-017-1684-3.
- Hellman, J. S., Jones, G., & Kaufmann, D. (2002). Far from home: Do foreign investors import higher standards of governance in transition economies?. Available at SSRN 386900.
- Herzfeld, T., & Weiss, C. (2003). Corruption and legal (in) effectiveness: an empirical investigation. *European Journal of Political Economy*, 19(3), 621-632. Available at: [https://doi.org/10.1016/S0176-2680\(03\)00018-1](https://doi.org/10.1016/S0176-2680(03)00018-1).
- Hines, J. R. (1995). Forbidden payment: Foreign bribery and American business after 1977. Available at: 10.3386/w5266
- Honlonkou, A. (2003). Corruption, inflation, croissance et développement humain durable. *Mondes en développement*, 123(3), 89-106.
- Johnson, S., Kaufmann, D., Shleifer, A., Goldman, M. I., & Weitzman, M. L. (1997). The unofficial economy in transition. *Brookings papers on economic activity*, 1997(2), 159-239. Available at: <https://doi.org/10.2307/2534688>.
- Kaufmann, D., Kraay, A., & Zoido-Lobaton, P. (1999). Aggregating governance indicators (Vol. 2195). world Bank publications.
- Krčalić, A. (2017). STAVOVI GRAĐANA O POLICIJI–Rezultati istraživanja javnog mnijenja za Bosnu i Hercegovinu. Available at: <http://css.ba/wp-content/uploads/2016/02/Bosna-i-Hercegovina-Stavovi-gra%C4%91ana-o-policiji-2016-3.pdf>.
- Lambsdorff, J. G. (1998). An empirical investigation of bribery in international trade. *The European Journal of development research*, 10(1), 40-59. Available at: 10.1080/09578819808426701.
- Mauro, P. (1995). Corruption and growth. *The quarterly journal of economics*, 110(3), 681-712. Available at: <https://doi.org/10.2307/2946696>.
- Mauro, P. (1998). Corruption and the composition of government expenditure. *Journal of Public economics*, 69(2), 263-279. Available at: [https://doi.org/10.1016/S0047-2727\(98\)00025-5](https://doi.org/10.1016/S0047-2727(98)00025-5).
- Milićević, R. (2009). Korupcija kao način preživljavanja. *Republika*, 21(466-467).
- Melgar, N., Rossi, M., & Smith, T. W. (2010). The perception of corruption in a cross-country perspective: Why are some individuals more perceptive than others?. *Economia Aplicada*, 14(2), 183-198.
- Méndez, F., & Sepúlveda, F. (2006). Corruption, growth and political regimes: Cross country evidence. *European Journal of political economy*, 22(1), 82-98. Available at: <https://doi.org/10.1016/j.ejpoleco.2005.04.005>.
- Méon, P. G., & Sekkat, K. (2005). Does corruption grease or sand the wheels of growth?. *Public choice*, 122(1), 69-97. Available at: 10.1007/s11127-005-3988-0.
- Mo, P. H. (2001). Corruption and economic growth. *Journal of comparative economics*, 29(1), 66-79. Available at: doi:10.1006/jcec.2000.1703.
- Murphy, K. M., Shleifer, A., & Vishny, R. W. (1991). The allocation of talent: Implications for growth. *The quarterly journal of economics*, 106(2), 503-530. Available at: 10.2307/2937945. Available at: doi:10.2307/2937945.
- Pellegrini, L., & Gerlagh, R. (2004). Corruption's effect on growth and its transmission channels. *Kyklos*, 57(3), 429-456. Available at: <https://doi.org/10.1111/j.0023-5962.2004.00261.x>.
- Piplica, D. (2011). Corruption and inflation in transition EU member countries. *Ekonomiska misao i praksa*, (2), 469-506.
- Piplica, D., & Čovo, P. (2011). Corruption and economic growth in Croatia. *Oeconomica Jadertina*, 1(2), 85-99. Available at: 10.15291/oec.206.
- Ravlić, S. (2010). Izvori političke korupcije u demokratskom poretku: O stranačkoj korupciji. *Zbornik Pravnog fakulteta u Zagrebu*, 60(6), 1241-1264.
- Rock, M. T., & Bonnett, H. (2004). The comparative politics of corruption: accounting for the East Asian paradox in empirical studies of corruption, growth and investment. *World Development*, 32(6), 999-1017.
- Rose-Ackerman, S., 1975. The Economics of Corruption. *Journal of Public Economics* 4(2): 187-203. Available at: <https://doi.org/10.1016/j.worlddev.2003.12.002>.
- Rose, R., & Mishler, W. (2010). Experience versus perception of corruption: Russia as a test case. *Global Crime*, 11(2), 145-163. Available at: <https://doi.org/10.1080/17440571003669175>.
- Shleifer, A., & Vishny, R. W. (1993). Corruption. *The quarterly journal of economics*, 108(3), 599-617. Available at: <https://doi.org/10.2307/2118402>.
- Javorcik, B. S., & Wei, S. J. (2002). Corruption and cross-border investment: firm level evidence. William Davidson Institute Working Paper No. 494. Available at: <http://dx.doi.org/10.2139/ssrn.344660>.

- Šporer, Ž., & Sekulić, D. (2011). Gubimo li povjerenje u institucije. *Kregar, J., Sekulić, D. & Šporer Ž, Korupcija i povjerenje. Zagreb: Centar za demokraciju i pravo Miko Tripalo and Pravni fakultet Sveučilišta u Zagrebu*, 71-117.
- Štulhofer, A. (2004). Perception of corruption and the erosion of social capital in Croatia 1995-2003. *Politička misao: časopis za politologiju*, 41(5), 74-86.
- Tanzi, V., & Davoodi, H. (2001). Corruption, growth, and public finances. *The political economy of corruption*, 2, 89-110.
- Wei, S. J. (1997). How Taxing is Corruption on International Investors?. *National Bureau of Economic Research Working Paper #6030*.