

Exploring Social media Knowledge as a Means for fighting Corruption in CEE Countries

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Abstract: It is evidently seen that social networks are assessed widely in recent times as a means of sharing knowledge, and more importantly, resist control from influential entities compared to the regular media. Social media fight corruption by making information readily available in the form of analysis, endorsements, and through campaigns and collaboration. For this reason, some researchers are increasingly interested in how knowledge of social networks impacts our society leading to corruption reduction. In this paper, we explore the contribution of the knowledge of social media networks in reducing corruption within CEE countries. Regression analysis is employed to analyze an eighteen-year panel data (from 2002 to 2020), using secondary data from the World Bank, the World Press Freedom Index, and Transparency International of the selected CEE countries. We analyze social media variables such as social media usage, cultural tightness looseness (CTL) as independent variables and used press freedom, political stability index, and GDP per capita as control variables. Also, with corruption as a dependent variable, we used control of corruption index (CCI) and corruption perception index (CPI) to ascertain the social media network effect on corruption reduction. This article contributes to the existing knowledge by discovering the unique role that social media knowledge plays in reducing corruption in CEE countries. The result has shown that both social media usage and CTL significantly affect corruption and its reduction. In addition, it allows us to propose some practical implications for policymakers.

Keywords: social media; Corruption; CEE; Knowledge; Regression Analysis

1. Introduction

Corruption has been the bane in many states of the world. Most affected regions are developing and emerging states whose economies are transitioning from weak institutions and infrastructure to combat corrupt practices of public officials and politicians. Corruption has been defined as an act of using state offices and power for the private gains of a public official (Ahmad, 2012), which culminates in rent-seeking behaviors of public officials and abuse of state resources. Many effects of corruption have been discussed widely among researchers, political, and civil society organizations. The general conclusion is that corruption lowers the growth of the economy while, it leads to disregard for the democratic rule of law. Other effects of corruption include deterioration of economic confidence (lack of investment) and disrespect to state institutions (bureaucratic inefficiencies), which poses a grave challenge to societies in the world.

The significance of social media knowledge in ensuring active participation in decision making and engaging in civic responsibility cannot be underestimated in recent discourse (Shaw et al., 2014). At the same time, culture serves as the social fabric and architect of the behaviors of social actors. In this context, this paper examines whether social media usage and CTL have a potential impact on the level of corruption in CEE countries (Meyer-Sahling and Mikkelsen, 2016). Tang et al. (2019) in their research on the effect of social media usage on the control of corruption and the moderating role of cultural tightness looseness, examine how social media usage reduces corruption in 62 countries, with data covering the period from 2011 to 2015. The analysis finds a positive correlation between the analyzed variables (social media effect on corruption control). The researchers indicate limitation of the study is however that of data unavailability. This research responds to the call for future research to explore further the association between social media usage and CTL on corruption.

Moreover, research exploring the role social media blogs play on reducing corruption in Russia through panel regression analysis found a positive significant relationship. The weakness of this study is the reliance on quarterly data for analysis (Enikolopov, Petrova and Sonin, 2018). By way of filling the gap, the current study employs annual panel dataset of the selected CEE countries. Jha and Saranji (2017), studied the impact of multiway means of communication on corruption by exploring the link between social media represented by Facebook network on corruption in a cross-sectional analysis of 150 countries and found a negative significance. The limitation of the current panel data on social media usage restricts the studies to only cross-sectional analysis. The need to explore more social media variables was highly recommended of which this study employs

As elaborated, most of the studies have concentrated on just social media impact on corruption and most often relied on a single measure for social media using types of social media tools like Facebook network, Twitter, Instagram, to assess social media usage effect on corruption. However, the question of whether the knowledge of such networks (social media usage, CTL) to corruption in a model remains unanswered. Based on this gap, this study seeks to bridge the gap by using composite variables which were calculated from different set of factors based on the survey conducted. This research aim is to explore how social media knowledge and Culture Tightness-Looseness contribute to reducing corruption in CEE countries.

To the best of our knowledge, less to no study explores the link between knowledge of social media and corruption in CEE countries. This study will give policy experts and the EU some implications to support and improve on the reduction of corruption. We contribute to science by adding empirical and practical recommendations based on our review of the existing literature and econometric analysis.

The rest of the paper is organized as follows. The next section provides a brief review of the existing literature to distinguish our paper from existing studies and help explain the contribution of our paper. In Section 3, we briefly describe our methodology and data sources. Section 4 outlines the empirical OLS findings and Discussion. In Section 5, we present the conclusions and recommendation.

2. Literature review

2.1 Corruption and its menace

Many factors have been said to influence corruption in many parts of the world. Corrupt practices manifest in predominant acts of giving and receiving bribes (both within the private and public sectors of the economy), government procurement irregularities, and lack of transparency in the decisions of government officials (Šumah, 2018; Tang et al., 2019). Uberti (2018) suggests corruption as mostly determined by the developmental levels of the state. However, corruption may manifest within the institutional, economic, and socio-cultural context of the state as well. Growing empirical literature finds the lack of fiscal prowess of nations, the small size of formal sectors, and the per capita income levels of people in the informal powers within the developing states to contribute to the perceived corruption (see for detail review Luiz and Stewart, 2014; Uberti, 2018). More so, the level and quality of institutions play a major role in corruption perception. Openness and transparency of government officials and adherence to the rule of law within democracies turn to reduce rent seeking, but also the strong engagement of citizens and media in recent studies have proven to minimize corruption perception of the public (Kolstad and Wiig, 2016).

Within the context of the research area of this study, many scholars have attributed corruption perception to be based on the culture, institutional, and political dictates of the communist and post-communist transition state (Mavisakalyan, Otrachshenko, and Popova, 2021; Karklins, 2016). Particularly, the communist state with central planning and regimental social welfare failed in curbing corruption aberrations. In that, elites of the political class use their privilege to *cut corners* and skip the bureaucratic exigencies of getting things done. Whereas many middle-class elites have benefited through corruption reward of the political class for legitimation (Sumich, 2008; Sumich, 2016). The trend has carried on to the post-communist era and the transition states have had perceived corruption among the populace.

Many of the recent empirical research analyze the historical connections vis-à-vis the contemporary factors of how institutions have evolved and shaped in the CEE countries. More so, institutional evolution has been the causative factors of social change and the degree of influence from the historical antecedent. Even so, no consensus can be reached in that regard. Nevertheless, more concentration is placed on the effect of corruption and its causes as well as modern tools to help curb the menace of corruption, which are readily at play. Our

focus is therefore on contributing to the hypothesis of social media network effect on corruption reduction. Many suggestions have been propounded for curbing the menace of corruption. Such of these tools is the e-governance system (Muhammed, 2014; Aerin et al., 2021; Ali et al., 2021) media and technology (Jha and Sarangi, 2017). ICT usage enables information storage, access process and transmit same for the purpose of its usage. Hence, media's role in corruption reduction cannot be taken lightly.

2.2 The fourth estate- the spectacle of social media

Social Media in the wisdom of the pioneers of the early democracy affectionately referred to as the fourth estate provides watchdog role in ensuring the functioning of democratic rule, which was established as an important pillar of government. The idea is to keep citizens informed and provide feedback to government for corrective actions whilst setting forth varying (but factual) opinions to that of an individual in public discourses. In the end, to strengthen the knowledge base of the society. Social media as household name in the media field gained prominence recently about two decades ago (Sajithra and Patil 2013). Social media has evolved from World Wide Web (WWW) era to Blogs and by the advent of supercomputers, networking apps and programs have made it possible (for detailed analysis see Kaplan and Haenlein 2010).

The spectrum of social media applications in recent times makes it impossible to define. However, distinctions can be made about the most prominent ones like Facebook, YouTube, twitter, snapchat and just recently Tik Tok. Social media (social networking, content creators and Blogs) can be categorized based on the social presence and the richness of the content with their functionalities (Kietzmann et al., 2011). These two attributes have great influence on social life of people. Thus, unlike the traditional media, the frequency and directness of social media influence social lives of people. Together with the richness of social media, societal discourses are broken down to the understanding of all people, aiding in easy digestion of policies of government and participation in public discourses as well as people making choices of their own (Suwana, 2020).

In the same way, social media with the element of presence and richness can influence the behaviors of public officials or expose their corrupt activities to the society. Social network sites such as Facebook and content creators' platforms like YouTube enables quick spread of information like organization of civil demonstrations and campaigns against decisions of power. At the same time, governments all over the world have adopted these platforms to propagate government's policy agenda and testing the general feelings of the entire society about plans and project in e-governance system.

2.3 Social media usage and corruption

In this section, we concentrate on the rapidly growing media usage and social media activities of *netizens* (internet users) as a key tool to enable anti-corruption campaigns. Current studies have found convincing evidence of the role social media play to succumb the menace of corruption in society. Through anti-corruption advocacy, netizens can reach out to many citizens within the shortest possible time and engage in collaborative campaigns by offering platforms for people to participate in the discourse of the state. While empowering them to expose and call out rent-seekers, in effect helping to control corruption (Oh et al., 2013; Kane et al., 2014).

Thus, social media brings to light the dark world of corrupt officials in exposé. In a recent study, Tang et al. (2019) measured social media usage effects and corruption reduction moderated by cultural tightness looseness. They observe that cultural tightness looseness moderate social media usage, and corruption negatively. What this means is that cultural fabrics of the society such as weak institutions with malfunctioning media serves as an enabling environment for corrupt officials. However, strong institutions and vibrant media curtails corruption. Perceived corruption of public officials can be influenced by social media usage in an open society with cultural looseness. Thus, the less opened the economy and culture of the people, the less social media usage can influence corruption.

The empirical analysis suggests that high levels of usage of the internet correlate with low levels of corruption. Information was scared and even when available, run through the elites or cadres of the political rulers in the communist regimes. Howard, Agarwal, and Hussain (2011) indicate that information censorship was prevalent within the centrally planned states for political and economic power preservation. More recently, internet and social media usage within the CEE countries have improved significantly providing a great avenue for public debate and exposé of corrupt officials. However, the demand for information resources in the post-communist era has seen remarkable growth amidst the optimism and hope for exchange of ideas and less restrictive diffusion of information, yet many are confused about the use of social media usage.

The denial of the closed society of the then CEE to the information world proved unworkable, but the quick adoption of internet usage tremendously has enabled the people to be engaged in the political and development process of the state. Unlike the censored media, the current external influence of media has served as watchdogs on the fighting of corrupt practices in societies through investigative news and reportage. This encourages collective action of citizens and sense of accountability of political leaders.

Indeed, Social media knowledge has propelled civil society to ensure accountability of the ruling class. Most importantly, the freedom of press in the post-communist era enabled the fight of corruption as evidenced by empirical research of Price (2019). Despite the historical and socio-economic connections within the CEE countries, research at various levels has been scanty on media usage at various levels (Burlacioiu, Boboc and Sava, 2018). The greater attempt by the CEE countries to disentangle themselves from the umbilical cord of communist corruption behaviors is prevalent in the study of Takacs-Haynes and Rašković (2021).

2.4 Cultural tightness-looseness and corruption

The above findings of Takacs-Haynes and Rašković (2021) lead us to the concept of cultural tightness looseness and its role in corruption reduction as a factor in tandem with the media in effectively promoting anti-corruption campaigns. One may be tempted to lump all CEE countries to the same culture. However, there exist cultural variations and the dimension of influence on corruption eradication in society. Conceptual studies have defined cultural tightness looseness as the capacity of the norms of the society in prescribing punishment, which has to do with factors such as the various socioeconomic strata of the society (Li, Gordon, and Gelfand, 2017; Tang et al., 2019).

In their study, cultural tightness looseness was used and found to negatively moderate the effect of social media on corruption fights. Their findings assert that the cultural norms influence behaviors of individuals including those with political power and serves as conduit for proper or corrupt acts. In the current research, we have used cultural tightness, looseness as one of the explanatory variables in determining the reduction of corruption (fight/ perception). Social norms are powerful external forces by which individuals get influenced and act on. These are inexplicable forces external of the individual but controls all actions and inactions of social actors based on the classical sociologists' account. Cultural tightness looseness deals with the pervasiveness and tolerance levels of behavior in society.

Extant research has found cultural tightness to exhibit strong social norms with low tolerance for deviant behaviors. On the other hand, societies with cultural looseness possess weak norms with high tolerance for deviant behaviors (Gelfand et al., 2011; Harrington and Gelfand, 2014). In this way, acts of corruption may be punished differently depending on the cultural spectacle of the observer and the domain of the individual. Tight cultures are intolerant of deviant behavior with higher incarceration of people for deviant acts. Same goes for corruption within political elites and public officials in the tight society. In such societies, social media usage may be used for exposing corruption activities due to the environmental and larger societal collectivism on compacting corruption (Harrington and Gelfand, 2014).

This way, corruption perception would be minimal and public officials will be required or discouraged from engaging in corrupt practices. There is a sense of responsibility to fight corrupt activities of officials as well as the Judiciary within the governance system of the state. On the other hand, the culture with the looseness trait gives leeway and tolerance of pervasive deviant behaviors by societal members. However, as reported by Tang et al. (2019), other empirical findings point to the fact that, in some tight societies, corruption may be tolerated, this makes the findings of the effect of cultural tightness-looseness inconclusive. This suggests that the cultural tightness-looseness relationship with the perceived corruption of the state officials and public employees is not in synch, hence our research seeks to add to the ongoing literature on this field by making cultural tightness-looseness an explanatory variable instead of moderating.

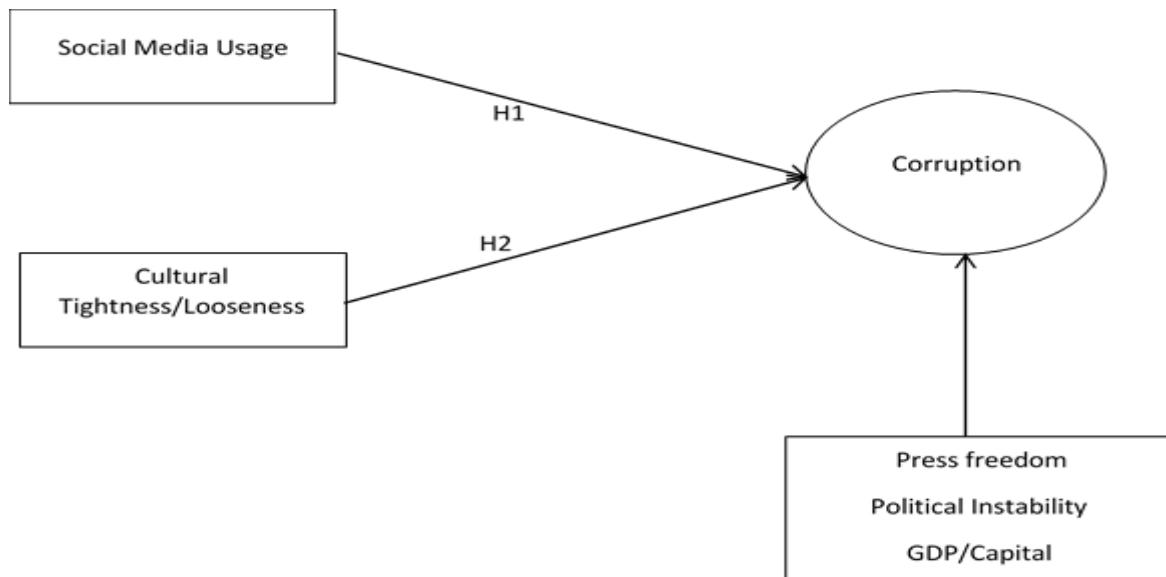


Figure 1: conceptual framework

The above figure shows the conceptual framework of the analysis on how knowledge of social media networks contributes to reducing corruption within CEE countries. Based on the reviewed literature, the following hypotheses have been formulated.

H1: Social media network knowledge significantly affects the perception of corruption and corruption control in the CEE countries.

H2: Cultural tightness looseness significantly affects the perception of corruption and corruption control among the CEE countries

3. Data and methodology

3.1 Research Design

The main objective of this research is to ascertain whether knowledge of social media networks and cultural tightness-looseness contribute to reducing corruption within Central and Eastern European countries (Albania, Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovakia, and Slovenia).

We relied on quantitative research design in conducting this research using the Ordinary Least Squares (OLS) regression modelling (Martinez- Vázquez, Lago-Peñas and Sacchi, 2017) in accordance with Montgomery et al. (2012), the OLS is adopted to have accurate and robust results when dealing with both dependent and independent data that are linear in nature.

3.2 Data Collection and Description

Empirical analysis is based on a panel dataset from the World Bank, Transparency International and Reporters without Borders. The research uses World Bank official website for data collection purpose on GDP per capita, political stability index, Control of corruption index, and social media usage (Jha, and Sarangi, 2017). Transparency International and Reporters without Borders data on the Corruption Perception Index and Press Freedom index were collected for this analysis. For Data regarding the Cultural tightness looseness (CTL). We adopted the data and methodology initiated by Gelfand, Nishii, and Raver (2006). Cultural tightness looseness encapsulates items on a scale of 0 to 10, where the most culturally tight society receives a 0 and the loosest gets 10 assessed by the clarity and number of social norms, the degree of tolerance for norm violations, and overall compliance with social norms in each nation. We used pooled data sets spanning eighteen calendar years, specifically 2002 to 2020, and a sample of 11 CEE countries as is the case of (Krishnan and Lymm, 2016). The sample used for the empirical model specification consisted of all Central and Eastern European member countries except Croatia, the reason being that most of the economies are in transition to the open capitalist market system, and with their historical connections, as well as poor recent performance score from the corruption perception index. The analysis realized 341 numbers of observations. The table below shows the variables used for the empirical, analysis.

Table 1: Descriptive statistics of variables

| Variables | Description | Sources |
|---|---|--|
| Control of Corruption index (Dependent) | This captures perceptions of the extent to which public power is exercised for private gain, including control of the state by powerful and private institutions in %. | Asongu, (2012) |
| Corruption perception index (Dependent) | The notion of scores and ranks of countries based on how corrupt the countries public sector is perceived to be by experts and business entities. | Transparency International, (2007) |
| Explanatory variables | | |
| Social Media Usage | Focuses on how social media services such as Instagram, Facebook, Twitter, LinkedIn, etc. are used by individuals for both personal and professional purposes in a country. | Nam, (2018); Larosiliere, Carter, and Meske, (2017). |
| Cultural tightness looseness (CTL) | Measures the degree and variance in social norms, the degree of tolerance for norm violations, and overall compliance with social norms in each country | Gelfand et al. (2011); Uz (2015) |
| control | | |
| Press Freedom | Measured by comparing the level of press freedom enjoyed by journalists and media in countries based on scores and evaluated using five contextual indicators, i.e., political context, legal framework, economic context, sociocultural context, and safety. | Camaj, (2013). |
| Political Instability | Measures Perceptions of the likelihood of political stability and political motivated violence, including terrorism. | Data.worldbank.org, (2017); Tang et al., (2019). |
| GDP/Capital | GDP per capita (logarithmic value). | Bai et al., 2020 |

Source: Author’s own adaptation

Mathematically, the OLS is defined as:

$$y = \beta_0 + \beta_1x + \epsilon_i \tag{1}$$

Where:

‘Y’ = dependent variable, i.e., control of corruption and corruption perception index

‘ β_0 ’= dependent variable value, that is, the y intercept

‘ β_1 ’= slope coefficient of each of the explanatory variables.

‘x’ = represents the value of the independent variable or the input variable

‘ ϵ_i ’= represents the error term.

Using the Gretl statistical package, we controlled for corruption using GDP per capita with the assumption that countries with higher GDP per capita growth or wealthy nations should be deemed less corrupt as they are able to afford a better and efficient institution to control corruption (Kolstad, and Wiig, 2009). More so, we also used the level of press freedom and political instability to control for corruption with the notion that countries with greater press freedom and political stability may see a drastic fall of corruption because of the free and independent media and exercise of political rights and freedom (Karnane, and Quinn, 2019).

3.3 Model Fit

We measured model fitness using collinearity analysis. We used the Variance Inflation Factor (VIF) for this purpose. The model showed the highest value of 2 which indicates no multicollinearity issues among the variables, with all variables showing less than value ten as opined by (Hair et al., 2017). Our analysis also shows that about 55% and 51% of the variance is explained in both models based on the R-squared figure.

4. Results and Findings

As hinted above, the accuracies predictive power of our analysis shown in Table 2 are 55% and 51%, respectively using the Cohen’s R-squared, for the models. These accuracies in our model explained can be said to be substantial and robust (Cohen, 1988). The predictive accuracies show a statistically significant power with the constant variable positive and highly significant.

This study investigates and explores how knowledge of social media networks contributes to reducing corruption within CEE economies. We first analyze empirically the impact of social media knowledge thus social media

usage and cultural looseness tightness against CCI and CPI to ascertain the nature of the relationship and the effect it has on corruption within CEE countries.

The results of the impact of each of the measures of social media knowledge on corruption are shown and presented in Table 2. Model 1 tests the hypothesis that social media knowledge (social media usage) has a significant effect on corruption. The evidence from the results of the analysis supports hypothesis H1 with a highly significant coefficient. Thus, the results show that knowledge of social media usage in the CEE countries has a significant high influence on corruption in models 1 and 2, with both showing an expected negative coefficient. The results prove that when government policies are targeted at increasing the citizens usage of social media networks, through acquisition of advanced technologies and reducing the cost of internet, it is likely to increase the level of advocacy, calls for accountability and transparency. This will have positive effects on the levels of corruption activities leading to reduction of the canker. As can be seen, social media usage influences corruption control and perception in a significant way.

Subsequently, we also tested for model 2, by testing the preposition that knowledge of social media (and cultural tightness, looseness) has a highly significant effect on corruption.

Table 2: Results

| Dependent Variables→ | Control of Corruption index (Model 1) | Corruption perception index (Model 2) | VIF |
|--|--|--|------------|
| Independent Variable/ Control C | Coefficient | Coefficient | |
| Constants | 41.33070*** (3.19974) | 49.4322*** (1.95356) | |
| Social Media Usage | -5.18435*** (1.17654) | -5.44495*** (7.18321) | 1.133 |
| Cultural tightness looseness CTL | 0.22253*** (0.03699) | 0.13368*** (0.02258) | 1.854 |
| Press Freedom-C | -0.56238*** (0.08079) | -0.30356*** (0.04932) | 1.778 |
| Political Instability-C | 0.08855** (0.04090) | -0.07441*** (0.02497) | 1.339 |
| GDP/Capital-C | 0.00072*** (8.32045) | 0.00040*** (5.07993) | 2.075 |
| No. of Observation | 341 | 341 | |
| R-squared | 0.552040 | 0.505410 | |
| Adjusted R-squared | 0.545354 | 0.498028 | |
| F-statistics | 82.56703 | 68.46584 | |
| Prob(F-statistics) | 0.000000 | 0.000000 | |
| Prob (Homoscedasticity) | 4.87108 | 3.59645 | |
| Akaike criterion | 2581.179 | 2244.667 | |

***p<0.001, **p<0.01, *p<0.1. Note: *** Parameter significant at 99 % level, ** significant at 95 % level, * significant at 90 % level, standard errors are in curly brackets.

The result of the analysis further shows a positive relationship between CTL in all models, which confirms hypothesis H₂ that, cultural tightness looseness significantly affects the perception of corruption and corruption control among the CEE countries.

The relationship suggests that, with a high level of significance at 99% confidence interval, in a too close culture, corruption is likely to increase, and advocacy not be tolerated or non-existent. Unlike the case in model 1, significant improvements in corruption can be attributed to the dictates of CTL. More so, there is a positive correlation between CTL, CCI and CPI, which signals that there is the likelihood of countries with loose cultures to experience an increase in corruption likewise a tendency of a decline in corruption due to free social media advocacy the tight cultures give credence to. To reduce the level of bias in our empirical results, we controlled for corruption using press freedom, political instability, and GDP per capita. In the absence of bias, our control variables showed both positive and negative coupled with high and medium significance in modules one and two. Within all models, the control variables helped to ascertain the clear effect of the explanatory variables.

5. Discussion and Conclusion

Our study followed enormous rich contemporary research on corruption and social network analysis, which has used the CPI indicators and social media knowledge diffusion (Jha and Sarangi, 2017). Determinants of corruption can be economic and noneconomic. The controls used, such as GDP, helped to control for the cross-economic differences and how the development levels of the different CEE countries influence the corruption perception. Press freedom has been a key determining factor in the fight of corruption. Hence, we controlled for the influence this factor may have on the perception of corruption in the CEE countries. Likewise, political instability is associated with corruption due to the breakdown of the political system, giving way to malfeasance and abuse of the system by the individuals who took down the system. The same can be said for the CEE countries, except that the experience of the breakdown of the Iron Curtain allowed for the powerful middle class and political cadres to amass wealth, which may influence corruption in the CEE.

The significant effect of social media knowledge and corruption perception and control corroborates previous findings like Jha and Sarangi (2017) whose study found a negative correlation between Facebook penetration and corruption. In other research, Tang et al. (2019) concluded that social media usage influences the level of perceived control of corruption. Their analysis also controlled for other factors which were employed in the current analysis, such as GDP per capita, press freedom, and political stability. In a discourse analysis, Frolova et al. (2017) conclude that mass consciousness of people through social networks attributes to the reduction of corrupt behaviors. It is believed and empirically found that people find their civic voices and can engage in civil political discourse using social media, but corruption reduction programs and attitudes are also culturally influenced. Our research has proved that in consonant with the work of Harrington and Gelfand (2014), cultural tightness looseness significantly affects how corruption is perceived and dealt with in terms of controlling the menace.

The current research has contributed to the growing amount of literature in the empirical analysis of social network knowledge and the control of corruption. In the study area, especially, some CEE member states perform worse after the most corrupt states in the CPI indexes, which are released annually. At the same time, we have been able to show that social media knowledge and usage critically help to control corruption. Most significantly, in lieu of Tang et al. (2019), the call to encourage research in CTL. The current study has shown that cultural norms which has to do with the capacity of the norms of the society in prescribing punishment to deviant behaviors have positive and significant effect on the fight and prevention of corruption. Within the CEE countries, social media usage has improved astronomically, however, there exists the lack of nexus between the usage and knowledge of social media tools in combating corruption. We therefore recommend that; more and stricter rules should be instituted coupled with strict monitoring and evaluation of policies directed at combating corruption to ensure fair and equitable distribution of resources to curtail corruption. Improving access to internet and liberalization of media can help solve the menace of corruption in the analyzed countries. Citizens in the analyzed states must use social media in forcing political powerholders to be transparent by ensuring fundamental principles of good governance for decision making.

In conclusion, combatting corrupt practices of public officials and politicians demands a critical innovative tool. The traditional legal regime through the judiciary is unable to curtail the canker as the corrupt nuts can find themselves to use the legal system to perpetrate corrupt activities and for protection against the punishment of the society. The result has shown that both social media usage and CTL significantly affect perceived corruption and its reduction.

Acknowledgement

Thanks to the anonymous reviewer for his comments in making this paper better. This work was supported by the Student Grant Competition of University of Pardubice SGS_2022_016.

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