

The Trend of the Tolerance of Gray Corruption and Its Determinants: Citizens' Perception in Korea

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Abstract

While most people regard grand corruption as a corruption, public officials and citizens have different views on gray corruption. Gray corruption is important in that it affects citizens' perception on the prevalence of corruption. Also, citizens tolerable to gray corruption would bear low mental costs when they commit corruption.

This paper examines whether the citizens' tolerance to seven types of gray corruption (small gift, favored promotion, wedding gift, rebate, personal use of public property, holiday present, and gift to teachers) can be explained by trust, political orientation, satisfaction with the government, gender, income, age, and education. We used survey data collected from the stratified sampling frame between 2007 and 2010 (n=4,822) in Korea.

The results suggest that citizens are more generous to gray corruption than public officials. The tolerance gap is not narrowed but widen recently. Also, the young show the higher tolerance of gray corruption than the old. Finally, we find that age, year, trust, gender, income and education explain the tolerance of gray corruption.

Keywords : gray corruption, tolerance, trust

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Introduction

The boundary of corruption is ambiguous. For instance, while some people see giving small gifts to public officials as a way of expressing one's gratitude to their service, others may consider the same behavior as corruption.. Compared to the malpractices apparently perceived as corruption such as bribery, graft, and misappropriation, we can find some practices perceived either corruption or just the way of life.

In order to address the issue of subjectivity and ambiguity in the concept of corruption, Heidenheimer(1970) suggested a framework distinguishing among black, white and gray corruption. His classification is based on how elites and ordinary citizens differently perceive corruption . 'Black corruption' is perceived by both parties as fundamentally harmful to the society and 'white corruption' is justified by both parties to be beneficial in some ways for society. Regarding 'gray corruption', which lies between these two extremes, elites and ordinary citizens have different views on its acceptability and punishability.

Heidenheimer(1970) asserted that gray corruption is the most destructive to a political system because it is the most difficult to define, detect and punish. However, due to its subtlety, gray corruption has not received much attention among corruption literature in Korea as well as in other countries. One reason would be semantic problem in defining gray corruption. It is inherently difficult to clarify ex ante meaning of gray corruption because it depends on subjective perception or opinion of the public or public officials. Werner argues that, as the range of white corruption expands, it legitimizes other types of corruption so that "the gray and black shades become progressively lighter". On the other hand, a new set of norm on aspects of the corruption issue is created and the actual parameters of what constitutes 'gray' or 'black corruption' tend to expand when anti-corruption campaigns in a society draw attention of the public. Another reason for the lack of study on gray corruption is related to its cultural aspect. The idea of 'culturally accepted practices' and 'a way of life' capture the cultural aspect of gray corruption. If some practices have persisted over years and people consider them socially acceptable, policy makers put less priority in controlling for them since the compliance costs of it will be high. Therefore, while gray corruption is commonly found and affect our daily life, we have limited ideas on how people perceive it because of the dearth of empirical studies. ,

This paper aims at elaborating the characteristics of gray corruption in the Korean context by examining following research questions. First of all, we test the

perception gap in gray corruption between public officials and civil servants. As Heidenheimer(1970) suggests, we expect that those two parties may have different perceptions to gray corruption. One may assume that civil society is armed with enlightened and ethical citizens. Considering the economic and political progress of the Korean society, we can expect that citizens are stricter to gray corruption than public officials. On the other hand, public officials who are required to adhere to a high ethical standard by laws and code of conduct may regard gray corruption as corruption, not an acceptable practice.

Empirical studies on the different perception to gray corruption between citizens and public officials are important in designing anti-corruption policies. While a corrupt incident involves not only public officials but also citizens as donor or recipient, most anti-corruption policies have emphasized on controlling the former through monitoring, punishment, and/or institutional reform of the government (Ashforth, Gioia, Robinson, & Trevino, 2008). These anticorruption polices targeting public officials implicitly assume the contrasting image of 'corrupted public officials and victimized citizens society'. If the assumption is true, citizens should have higher ethical standard than public officials and, therefore, the former commits gray corruption because of the latter's solicitation. If this conjecture is true, how to prevent public officials from corruption is a primary question in designing anti-corruption policies and empowering civil society can be an effective approach for it. However, if such conjecture is wrong, the anti-corruption polices may set wrong target and fail to control gray corruption..

Secondly, this article tests the convergence hypothesis of perception of gray corruption. We live in the information era. Both citizens and public officials are exposed to mass media, social network service, and tremendous amount of information. They also frequently interact with each other through formal and informal relation. Hence, their perception gap to gray corruption would not be wide as we think and will be attenuated over time. For instance, in the past, Korean public officials took it for granted that they found a job at the stated-own enterprises or government-linked agencies after they retired. Yet citizens were opposed to the practice calling them 'parachute men'. However, both citizens and public officials regard the practice as corruption these days since the negative perception to the practice is shared among people. If such a convergence hypothesis is true, anti-corruption policies related to perception change of people do not need to be specifically designed for each group in the long run.

Thirdly, if there is any evidence of the heterogeneous perceptions to gray corruption, we need to identify why some citizens are tolerant of gray corruption while

others not it. As many studies suggest, the perception of corruption is affected by a variety of factors such as gender, education, trust in government, etc.. These factors can affect citizens' perception of gray corruption. We examine which factors significantly affect the tolerance to gray corruption (TGC) using two-stage least square model.

To answer the aforementioned empirical questions, we organize this article as follows. In the next section, we discuss why gray corruption is critical in the Korean context, especially as a major source of corruption. Then, we review literature to identify potential explanatory variables affecting citizens' perception of gray practices. Using these variables, we perform empirical analysis using time-series dataset collected from 2007 to 2010 (n=4,822) to analyze which explanatory variables are significant in explaining perception to gray corruption and to test the convergence hypothesis. Finally, we provide interpretation of results and implications to design anti-corruption policies.

Why Gray Corruption Matters in Korea?

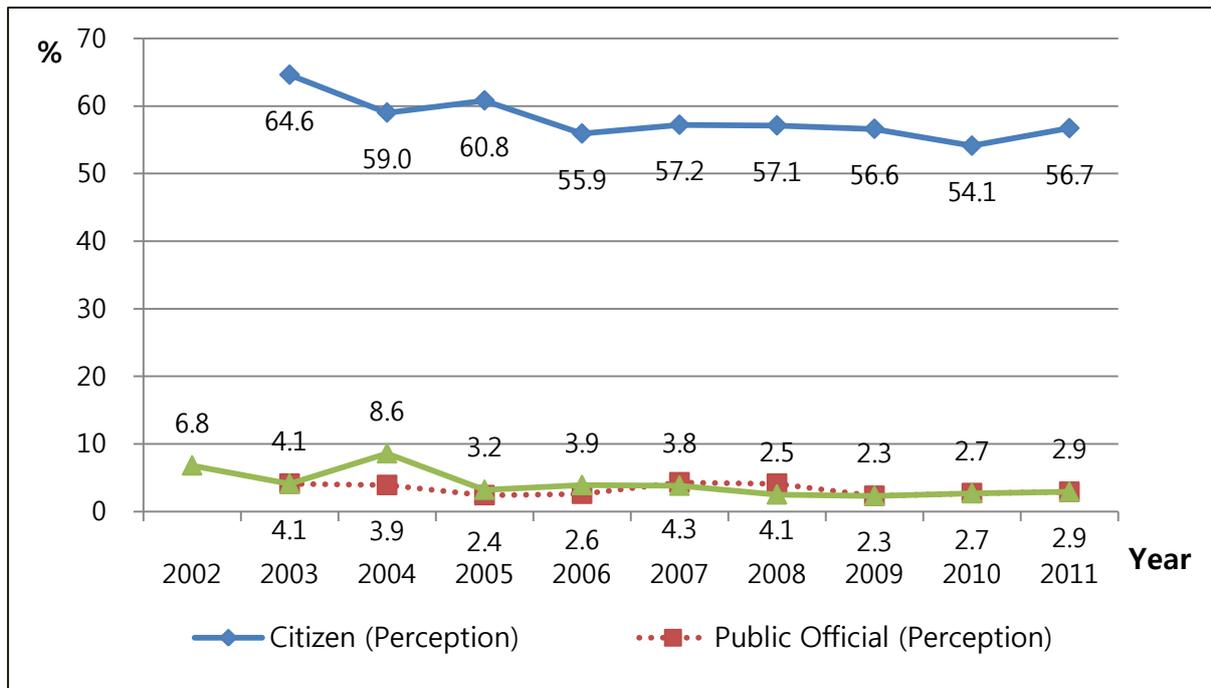
When the Nobel Economics prize laureate, Robert Lucas called the economic and social achievement of Korea as a miracle in 1993 , many Koreans thought that such a praise would not be relevant as they had little confidence in its economic and political system at the time. However, for the two decade after then, Korea has achieved another significant progress in its economy and democracy. It successfully weathered the 1997 Asian crisis and 2008 global financial crisis and becomes the 12th largest country in the world measured with PPP GDP by IMF in 2012. Its democracy is now stable enough to peacefully resolve the impeachment of the then-President Roh, Muhyun in 2004. National security is highly reliable despite the continuous military threat of North Korea. Most socio, economic, and political circumstances support that the Korean government, at least partially, should take a credit to the miracle of Korea.

However, one 'paradoxical malady in Korea' is corruption. According to Transparency International's corruption perception index (CPI), aside from its validity, South Korea is ranked 44 out of 182 countries in 2011, which is very serious condition considering its political and economic level of progress. One might refute the score by arguing that the CPI fails to reflect the real status of Korea as it is based on the ranking following international standard. The rebuttal may lose its ground if we refer to domestic corruption perception measures.

Figure 1 shows the perception of corruption in Korean for the last decade,

measured by Anti-corruption & Civil Rights Commission (ACRC). As we can see, around 56.7% of citizens believed that the government was corrupt in 2011. Such a high level of corruption perception has persisted since 2003. On the one hand, we may conclude that corruption is truly a serious problem in Korea. However, we can find the corruption perception of public officials indicates another contrasting trend. Since 2005, less than 4% of public officials believed that the Korean government is corrupt. On the top of this contrasting perception between citizens and bureaucrats, there is the actual experiences rate of bribing money and gift equivalent to more than \$50 which also records less than 3% in 2011. Simply speaking, citizens believe that the government is corrupt even though they rarely experience corruption. Moreover, public officials do not even think the corruption is serious in the Korean government.

Figure 1. Trends in Perception and Experience of Corruption in Korean



Source: ACRC annual perception of corruption survey.

Before jumping into a conclusion that the civil servants are the root of corruption, we have to consider several possible issues on the different perception level of corruption between citizens and public officials. One issue would be about reliability and validity of data. As the data are collected by the government agency, the validity threat is possible in a way to make public officials underreport the seriousness of corruption. To check this validity threat, we examined other data collected by the Korea Institute of

Public Administration (KIPA) which is also the public but an independent research institution. We found the similar pattern in the perception of corruption as shown ACRC data. We also checked the survey design but both surveys were conducted by professional survey companies which employed probability random sampling method considering the region, gender, and/or income as strata. In addition, the reliability of citizen's experience may be doubtful, for people usually give negative answers to questions because they have a higher expectation to the government regarding its integrity.

Citizens' high perception level of corruption despite its low experience rate can be caused by their low trust in government. As discussed in the next section, a lot of studies argue that there is a strong relationship between the level of trust and perception of government. We can explain citizens believe their government is seriously corrupt even without being involved in malpractices because they basically do not have confidence in their government. Moreover, in measuring general image about government as in the survey of ACRC, we can guess the influence of trust would be a lot stronger than in the case of measuring perception of individual corruption.

The perception gap between citizens and public officials can be seen paradoxical in that, following Heidenheimer's categorization, the elites usually want to see gray corruption to be punished on grounds of principle while others not and the majority may well be ambiguous (Heidenheimer, 1970: 161). In order to understand the perception gap between citizens and public officials, we need to compare their attitude toward certain types of corruption under the same situation because citizens and public officials conceive the different types of corruption when they answer the survey question. Public officials, in general, limit their view to black corruption but citizens consider gray as well as black corruption when they judge the status of government corruption. If gray corruption is serious or prevalent enough, the perception gap between public officials and citizens originates from whether to include gray corruption in their judgment.

This hypothesis can be indirectly supported taking into other data. According to KIPA survey results¹ from 2000 to 2010 (KIPA 2010: 334), out of 12 factors causing corruption, social practices which can be a proxy of gray corruption are ranked the most significant (52.2 on 100-point scale) factor explaining the level of corruption. It is far

¹ While the sample sizes vary slightly over years, around 1,000 businessmen who are selected from random stratified sampling framework participated in the survey.

more important than other factors such as low salary (15.2), heavy regulation (31.49), and opaque administrative procedures (27.44). Also, when the KIPA survey asked why respondents gave bribery or gift to public officials, 59.5% of them answered that they believed their behaviors are just 'social practice'. Only 1.0% of bribery givers choose the "explicit asking by public officials" as a major motive (KIPA 2010, p.324). This result suggests that citizens who pay bribery tend to believe that they give money to public officials because it is cultural and social practices.

Taking into this empirical evidence, we can postulate that citizens' high level of corruption perception might not be because of grand or black corruption but gray corruption. Few has brought this gray corruption issue into the front line in research or designing anti-corruption policies. Therefore, empirical research about gray corruption should be taken to resolve the paradox of perception trend of corruption in Korea.

Types and Measure of Tolerance of Gray Corruption

Measuring the level of gray corruption is not our primary concern in this paper. Instead, we are much interested in how citizens perceive gray corruption. By its definition, people perceive the gray corruption differently as either corruption or not. We can label such a different attitude to gray corruption as 'tolerance of gray corruption (TGC)'. If the tolerance is high, people tend to regard gray corruption as socially accepted norm and pay less moral costs when they commit gray corruption.

Recently, many scholars attempt to define corruption based on the public opinion perspective (Peters & Welch, 1978; Gorta & Forell, 1995; Gibbons, 1989; Heidenheimer & Johnston, 1989). In this approach, the demarcation between corrupt and non-corrupt behavior lies in how citizens perceive the given behavior. If they feel that public officials' behavior betray the citizens' collective trust and expectation, the behavior can be corruption. Simply speaking, the boundary of corruption depends on the contemporary people's opinion on given practice, not just on laws or pre-defined normative standards.

There are diverse forms of social practices of gray corruption in Korea. Most commonly cited social practices of gray corruption are: holiday gift (*ttokkap*), gratitude gift (*chonji*), wedding gift (*chukkigeum*), asking favor to relatives for job recruitment or promotion, and rebates.

The holiday gift is given on the traditional holiday such as the lunar new year's day, mid-autumn festival (*Chuseok*, Korean thanksgiving day). In Korean, the holiday gift

is called *Ttokkap* which means rice-cake expenses. Like other Asian countries, Korea has a tradition to celebrate these holidays with their neighbors and *Ttokkap* was originally offered as a token of gratitude to their superiors. The holiday gifts can be a form of liquors, voucher usable in department stores, money, and so on. Notwithstanding these innocuous origins, *Ttookkap* has degenerated into a means to improperly obtain favors from public officials .

The gratitude gift to teachers is highly popular in school called *Chonji*. On teacher's day or parent conference, parents usually give gifts or money to teachers to show their gratitude. However, as some parents give excessive money or gift, it causes many problems. One noticeable thing is that *Ttokkap* and *Chonji* might be considered as bribery. However, the Korean Supreme Court ruled that these holiday gift and gratitude gift to teachers are applied to 'social courtesy exception' and are not a bribe only if the amount does not exceed the socially acceptable level and not directly related to public officials' direction actions to favor the giver. (Kim & Kim, 1997, p.565)

Wedding gift is another form of gray corruption in Korea. Like other countries, wedding invitation is sent out to relatives and friends to whom the marriage couple or parents gave money before. Gray corruption happens when the invitations are sent to people who may cause a conflict of interests. For instance, if a businessman receives a wedding invitation from public officials who can approve his contract, he feels like he has to send money even he doesn't know the inviter well. In this case, the wedding is less of a celebration than a business transaction.

Regarding rebates, there are two types of rebates. One is receiving the money after completion of contract and using it for the recipient's organization. The other is to use it privately. While both can be seen corrupt, some people regard the former as non-corruption.

Finally, asking the favor to relatives or friends for a job or promotion of children or close friends can be gray corruption. This is related to cronyism, nepotism and/or favoritism. This behavior reflects natural human proclivity giving a favor to friends, family, relatives, former seniors and anybody close and trusted. As Koreans put high priority in the social ties based on kinship, school, and other social networks, favoritism can strongly affect public decision. In particular, public officials cannot turn down the lobby of their former senior who requests such as asking a favor for his/her children for the job.

We used 14 questions to measure seven types of gray corruption: gift, favoritism, wedding gift, giving to teacher, holiday gift, rebate, and personal use of public property. Appendix 1 provided detailed questions. All these seven types of gray corruption are

measured on the five-point scale.

Explanatory variables of TGC

The TGC can be affected by various explanatory variables. We identify potential explanatory variables from literature. First, we include trust in the government in the model. If people do not trust in the government, they would rely on individualistic ways to maximize their own interests, rather than following the rules and laws which results in high TGC. The opposite causality is also plausible. Uslaner(2004) suggests that people who have faith in others are more likely to endorse strong standards of moral and legal behavior. In this line of thought, the TGC would be high, if people have less trust in the government.

Another commonly cited variable affecting the perception of corruption is gender. As a gender is a biological characteristics, it cannot be a pure cause because there is no way to experimentally change it (Holland 1987). As Sung (2003) argues, the observed association between gender and corruption is spurious and mainly caused by its context. The context might be related to masculine culture. Countries with strongly masculine culture would have higher perceived corruption than countries with more feminine cultures (Davis & Ruhe, 2003; Gets & Vlokema, 2001). Such a negative relationship between masculinity and corruption is because the masculine society tends to prefer "tough" values such as assertiveness, materialism, and self-orientation .

Age is controlled as well in our model. Many studies on Korean corruption (Kim & Yun, 2004; Kim & Yeun, 2004; Jo & Lee, 2006; Jin and Seo, 2007) argue that the old is more likely to commit corruption because the old are exposed to traditional culture such as cronyism, amoral familism, and Confucian tradition tolerating the bureaucrat's corruption. Contrast to the old, the young would be inclined to resist the public authority and negative to corruption than the old (Kim et al. 2011), due to frequent exposure to internet mass media which deliver negative information about corruption of elites. Hence, as the young may have the higher ethical standard than the old, we can postulate that the age may affect the TGC.

The education is another factor influencing the TGC. Ethical standard can be nurtured through education. Hence the educated citizens may have higher moral standard and in turn it can decrease their TGC. Empirical evidence, however, is not consistent. Some support the negative relationship between corruption and the education level (Truex 2010; Aldashev 2004) while others fail to find significant evidence

or even shows causality of opposite direction. Hence, we should control for the education level in the model.

Finally, individuals' income level needs to be controlled. In comparative studies, it has been argued that GDP per capita is related to the corruption level of a country. However, at the individual level, it is not clear if income affects the attitude to corrupt behaviors. While You & Khagram (2005) provides insignificance of the income variable, other studies (Jin and Seo 2007, p.15) report the negative relation between corruption and the income level.

Appendix 1 provides the detailed questions and scale used for measuring the above variables. One noticeable variable is trust. The questionnaires directly asked about institutional trust in the legislative, court, and executive and in elites such as president, parliamentary members, and high rank public officials. We aggregated these six questions to measure the overall level of trust in government. We also performed the result of robustness check by using a factor score of trust and our findings still hold.

Data and Statistical Model

This paper relies on two datasets. One is the 2007-2010 citizen perception survey data collected by Knowledge Center for Public Administration and Policy (KP&P), Seoul National University. The survey employed two stage probability sampling frame. On the first stage, it identified stratified subpopulation according to region, age and income. Then, it applied cluster sampling within the strata. Gallop Korea and other survey companies collected data using the face-to-face and/or telephone interview method. While the survey includes both civil servants and public officials, we excluded public officials from the analysis as the number of them in the sample is very small. Demographical distribution of the samples is shown in Table 1. Gender, education, and income distribution reflects the population well and each category's frequency proportion is relatively stable over years.

Table 1. Summary of Sample of KP&P's Citizen Survey

(unit: person, %)

Year		2007	2008	2009	2010	Average Percentage
Education	elementary	84 (6.95)	46 (3.83)	95 (7.84)	94 (7.82)	6.62

	middle	86 (7.12)	67 (5.58)	114 (9.41)	138 (11.48)	8.4
	high	612 (50.66)	478 (39.83)	583 (48.1)	542 (45.09)	45.94
	college	153 (12.67)	132 (11)	154 (12.71)	133 (11.06)	11.86
	university and beyond	273 (22.6)	477 (39.75)	266 (21.95)	295 (24.54)	27.19
Gender	male	608 (50.33)	627 (52.25)	596 (49.17)	596 (49.58)	50.33
	female	600 (49.67)	573 (47.75)	616 (50.83)	606 (50.42)	49.67
Income	≤\$2,000	212 (17.55)	296 (24.67)	222 (18.32)	276 (22.96)	20.86
	≤\$4,000	306 (25.33)	275 (22.92)	345 (28.47)	327 (27.2)	25.99
	>\$4,000	690 (57.12)	629 (52.42)	645 (53.22)	599 (49.83)	53.15
N		1,208	1,200	1,212	1,202	4,822

The other survey dataset was designed to measure the perception of public officials. As in citizens' perception survey, the probability sampling was used to measure the perception of public officials only shifting the target population to civil servants. While 2009 and 2011's survey targeted central government's officials, 2010's target was local governments' officials. As all the questions on gray corruption are the same over time, we used these datasets to compare citizens' TGC with that of public officials.

To test our first research question on the difference in the TGC between citizens and public officials, we used one-way analysis of variance test. Also, we tested the change of perception gap between two parties by analyzing the trend of the TGC over years. Finally, we identified statistically significant explanatory variables of tolerance of corruption by using two-stage least square regression model.

Three methodological issues are taken into the regression model. One is the heteroscedasticity problem. As we used time-series data collected from different regions and groups, the error variance would not be constant among groups and/or years. As the heteroscedasticity can affect the estimates of standard error, we adjusted it using Heteroscedasticity-Consistent standard error estimation. Another issue is the endogeneity problem due to dual causality of trust and TGC. The corruption can be both an effect and a cause of the trust in government. According to our Hausman's endogeneity test result, we found out the existence of endogeneity. Following the standard econometric analysis technique to exclude the endogeneity biases, we employed two-stage least

square model (2SLS). In the second stage, we used political conservativeness as a primary instrumental variable. The third issue is the possibility of multicollinearity because income and education may be highly correlated. Since all variance inflation factor (VIF) scores of independent variables were less than 2, we excluded the possibility of multicollinearity.

Analysis and Findings

By definition, gray corruption can be differently understood among the contemporary people in a society. Some regard it as corruption, others not. Following analysis results suggest that there is heterogeneous understanding of gray corruption between public officials and citizens, and it persists over year. In addition, citizens are more generous to gray corruption, especially the young than the old.

The Different Tolerance Level of Gray Corruption

We tend to assume that corruption is mainly because of the unethical behavior of public officials. On the contrary, citizens are regarded as innocent victims. Due to this asymmetric assumption on the ethical behaviors of citizens and of public officials, anti-corruption policies mainly target public officials. Our analysis results, however, suggest that the citizens are far more generous to gray corruption.

As shown in Table 2, citizens are more tolerant of gray corruption. Looking at the wedding gift, we can find that citizens are less likely to consider 'taking wedding gifts' as corruption (3.3) than civil servants (2.9) in 2009. Such high tolerance is also found in gift and private use of public property. The differences of public officials' and citizens' tolerance level become even larger in 2010. The citizens became more generous to gray corruption while public officials were stricter to gray corruption. Therefore, instead of converging to the lower level of TGC, the gap in TGC between citizens and public officials seems to widen. Such a trend implies that gray corruption prevails in Korea not simply because of unethical public officials but the citizens who are ready to commit corruption as they do not think those behaviors are wrong.

Table 2. Difference in TGC between Citizen and Public Official over Time

Type	Citizen		Public Official		
	2009	2010	2009 (Central)	2010 (Local)	2011 (Central)
Gift	2.64(0.03)	2.7(0.03)	2.25(0.03)	2.17(0.03)	2.2(0.03)
Personal Use of Public Property	2.63(0.03)	2.8(0.03)	2.75(0.03)	2.53(0.03)	2.63(0.03)
Wedding Gift	3.3(0.03)	3.36(0.03)	2.95(0.04)	2.9(0.03)	2.95(0.03)
Sample Size	1,195	1,189	800	883	1,320

Figure 2. Difference in Average TGC between Citizen and Public Official

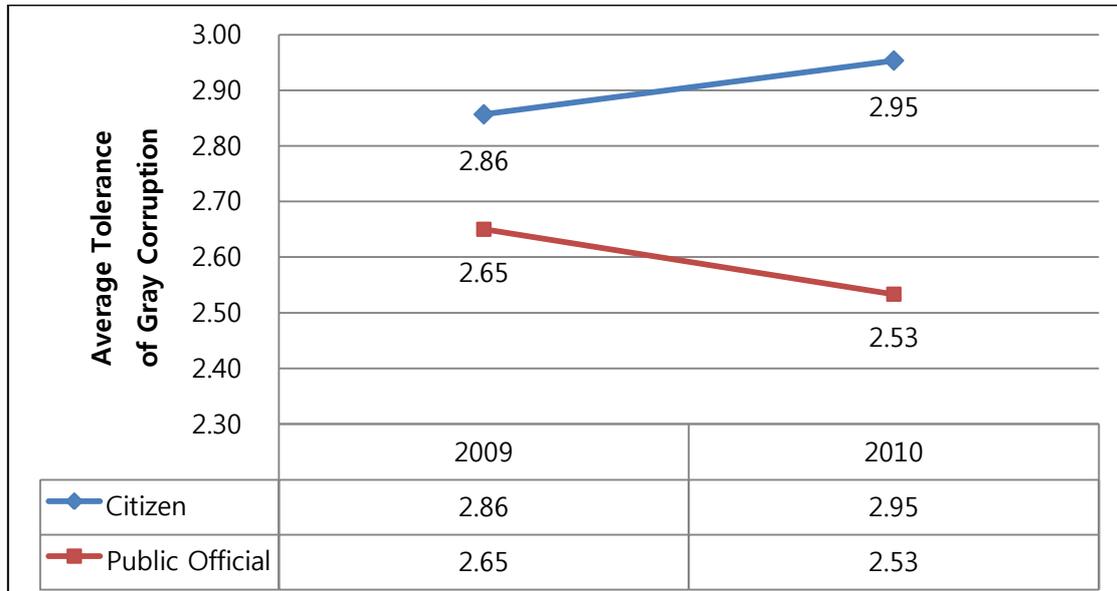


Table 3 shows citizens' tolerance to different types of gray corruption by years. Citizens are highly negative to rebates and favoritism. In case of rebates, citizens believed that taking rebate and privately appropriating it is corruption or serious corruption (1.42~1.71). Interestingly, even with the same amount of rebate, if public officials use it for the organization, citizens are more tolerant of the behavior (1.81~2.05) although they still regard it as weak corruption. Similar pattern is found in the tolerance to holiday gift. Citizens are more generous to organizational use of the holiday gift than private appropriation.

The second less tolerant type of gray corruption is asking a favor for a job of

one's children (1.71~2.13). If public officials select his high school junior to give promotion when the candidates are equally qualified, citizens believe that such a behavior is corruption (2.00~2.33)

Citizens are tolerant of wedding gift but the amount of money affects the degree of tolerance. If a public official received \$30 wedding gift from the duty-related party, citizens would take it as weak or moderate corruption (3.55~3.68). However, if the amount increases to \$100, the tolerance level drops to 2.61~3.04.

Even though the same amount of money is taken by a teacher (\$100), the tolerance to gifts to teacher (*Chonji*) depends on the giver. For instance, if parents give a teacher the gift, they somewhat strongly view it as corruption (2.26~2.72). However, if a teacher receives the gift from his former students, it is weakly considered as corruption (3.52~3.82).

Table 3 also shows that citizens become more tolerant of most types of gray corruption over the four years. From 2007 to 2010, the overall tolerance increase around 14.81% (from 2.28 to 2.62). This trend contradicts to our expectation that economic and political progress of Korea over time would result in higher ethical standard of citizens.

Table 3. Citizens' TGC by Types of Gray Corruption over Years

Type	Question	2007	2008	2009	2010	Average
Gift	A public official receives gifts worth 100 dollars from his/her subcontractor.	2.15 (0.03)	2.33 (0.03)	2.58 (0.03)	2.64 (0.03)	2.43
Favoritism	A local assemblyman gives his son a job at City Hall.	1.71 (0.03)	1.84 (0.03)	2.02 (0.03)	2.07 (0.03)	1.91
	A local assemblyman gives a job at City Hall to his/her supporter.	1.75 (0.02)	1.93 (0.03)	2.08 (0.03)	2.13 (0.03)	1.97
	A boss promotes his high school junior among candidates with similar qualifications.	2.00 (0.03)	2.27 (0.03)	2.28 (0.03)	2.33 (0.03)	2.22
Personal Use of Public Property	One makes a private long distance call with office phone.	2.54 (0.03)	2.73 (0.03)	2.75 (0.03)	2.88 (0.03)	2.73
	One leaves office for a long time without notice for personal affairs	2.26 (0.03)	2.50 (0.03)	2.51 (0.03)	2.72 (0.03)	2.50
Wedding Gift	A public official receives a 30-dollar-gift for his/her child's wedding from a duty-related party.	3.35 (0.03)	3.67 (0.04)	3.62 (0.04)	3.68 (0.03)	3.58

	A public official receives a 100-dollar-gift for his/her child's wedding from a duty-related party.	2.61 (0.03)	2.84 (0.04)	2.99 (0.04)	3.04 (0.04)	2.87
Giving to Teacher	A teacher receives 100-dollar-gift card from a student's parents at Teacher's Day.	2.26 (0.03)	2.51 (0.04)	2.70 (0.03)	2.72 (0.03)	2.55
	A teacher receives 100-dollar-gift card from a former student at Teacher's Day.	3.52 (0.04)	3.82 (0.04)	3.80 (0.04)	3.58 (0.04)	3.68
Holiday Gift	A public official receives 300 dollars from a related company to distribute among coworkers.	2.05 (0.03)	2.29 (0.04)	2.42 (0.03)	2.41 (0.03)	2.29
	A public official receives 300 dollars from a related company to spend on managing the organization.	2.22 (0.03)	2.42 (0.04)	2.51 (0.03)	2.49 (0.03)	2.41
Rebate	A public official receives 5% rebate and uses it personally.	1.42 (0.02)	1.54 (0.03)	1.64 (0.02)	1.71 (0.03)	1.58
	A public official receives 5% rebate and uses it for his/her organization.	1.81 (0.03)	1.91 (0.03)	2.05 (0.03)	1.97 (0.03)	1.94
Average		2.28	2.49	2.59	2.62	

Summing up, we can find the TGC varies according to the types of gray corruption, amount of money, how to use the money, types of giver, and time. The convergence hypothesis of TGC is not supported. Instead, citizens are more tolerant to gray corruption but public officials become more opposite to it over time.

Factors affecting the tolerance level of gray corruption

From the literature, we identified five potential explanatory variables: trust, age, gender, education and income. Also, we are interested in if the tolerance level has increased over years even after controlling for these explanatory variables.

As discussed, trust can be both an explanatory and dependent variable of corruption. To resolve this endogeneity problem, we used 2SLS estimation approach. In the first stage, we constructed regression of trust using the political conservativeness and satisfaction with the President as potential instrumental variables. It turns out that the political conservativeness is closely correlated with trust but not correlated with TGC. Hence, we can use it as an instrumental variable and run 2SLS regression by each type of gray corruption.

Table 4 provides the analysis results. Firstly, we can find the positive correlation

between trust and TGC in the first stage regression, and the regression coefficients of TGC are positive, which implies that if citizens are more generous to gray corruption, they trust in the government more. In the second regression, we can also find positive regression coefficients while some of them are not statistically significant. The positive coefficient suggests that the higher trust in the government results in the larger TGC.

The coefficients of the age and the year are also statistically significant. The negative coefficient of the age implies that the young are more tolerant of gray corruption than the old. This is consistently found in six types of gray corruption except giving to a teacher. Also, the coefficients of year are positive. This suggests that even after controlling for other variables, Korean consider gray corruption as socially acceptable practices more than before. Taking all these results into consideration, we can suggest that moral costs of citizens committing gray corruption would be lower than the past. Moreover, as the young generation is more generous to gray corruption than the old, there is a risk that gray corruption will be worsen in future in Korea. Therefore, we can conclude that gray corruption will be a seriously counted by the Korean policy makers in designing anti-corruption policy.

Finally, gender, education and income are partially significant in some types of gray corruption. The male are more generous to holiday gifts and rebates than the female. This result can be explained in the Korean context that as the male have more experiences doing business and work for the companies, they are accustomed to holiday gifts and rebates. More educated citizens are strict to wedding gift and personnel use of public property. Also, the high income group shows the lower tolerance to the personal use of public property.

Table 4. Results from 2SLS Analysis

Stage	Explanatory Variable	Type of Gray Corruption						
		Gift	Favoritism	Wedding Gift	Giving to a Teacher	Holiday Gift	Rebate	Personal Use of Public Property
1st Stage	TGC	0.29*** (0.04)	0.43*** (0.07)	0.40*** (0.07)	0.52*** (0.1)	0.16*** (0.04)	0.28*** (0.07)	0.28*** (0.05)
	Political Orientation	-0.31*** (0.01)	-0.29*** (0.01)	-0.30*** (0.01)	-0.32*** (0.01)	-0.32*** (0.01)	-0.30*** (0.01)	-0.31*** (0.01)
Dependent Variable: Trust	Satisfaction with President	0.00 (0.01)	0.00 (0.01)	0.01 (0.01)	0.01 (0.02)	-0.01 (0.01)	-0.01 (0.01)	0.00 (0.01)
	Gender	-0.04* (0.02)	-0.03 (0.02)	-0.04 (0.02)	-0.04* (0.02)	-0.03 (0.02)	-0.02 (0.02)	-0.05** (0.02)
	Education	0.02* (0.01)	0.01 (0.01)	0.00 (0.01)	0.02* (0.01)	0.02* (0.01)	0.02* (0.01)	0.02* (0.01)

	R-squared	0.08	0.05	-0.21	-0.36	0.18	0.16	0.09
	Trust	0.02 (0.06)	0.19*** (0.05)	0.09 (0.06)	-0.05 (0.06)	0.03 (0.06)	0.19*** (0.05)	0.06 (0.06)
	Age	-0.04** (0.01)	-0.03** (0.01)	-0.03** (0.01)	-0.01 (0.01)	-0.13*** (0.01)	-0.08*** (0.01)	-0.05*** (0.01)
2nd Stage	Gender	0.02 (0.03)	0.01 (0.03)	0.01 (0.03)	0.00 (0.03)	0.10** (0.03)	0.05* (0.02)	- (0.03)
Dependent Variable:	Education	0.00 (0.02)	-0.01 (0.01)	-0.06** (0.02)	-0.01 (0.02)	-0.03 (0.02)	-0.01 (0.01)	-0.03* (0.02)
TGC	Income	0.00 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01* (0.01)	-0.01 (0.01)	0.00 (0.01)	0.03*** (0.01)
	Year	0.18*** (0.01)	0.10*** (0.01)	0.11*** (0.02)	0.09*** (0.01)	0.12*** (0.02)	-0.07*** (0.01)	0.12*** (0.01)
	R-squared	0.04	0.05	0.02	0.01	0.04	0.04	0.03

Discussions and Conclusion

Among various types of corruption, this study focuses on gray corruption. We analyze whether citizens and public officials view gray corruption differently on whether it is corruption or not. Our analysis results suggest that the citizens' TGC is higher than that of the public officials. Unlike the commonsensical image of 'corrupt public officials and victimized citizens', it turns out that citizens have lower ethical standard of gray corruption than public officials. The former pays less moral costs when they give gifts or rebates. As such, there is a high chance that gray corruption is committed by citizens. Hence, if anti-corruption policies merely demand higher ethical standard of public officials, they would not be effective. Thus, the government has to design a policy to lower TGC of citizens.

The seriousness of gray corruption in Korea is that TGC has increased over years and the young generation is more generous to it. This implies that gray corruption will not decrease in near future and be more likely to persist or even worsen.

Because of the high TGC of citizens, we should not simply argue that more participation of citizens in policy making process or citizen-driven anti-corruption policies is the best solution for mitigating gray corruption in Korea. Without citizens' realization of the seriousness of gray corruption, the government has to pay more costs for preventing it. According to the Code of Conduct for Public Officials (Presidential Decree No.21238), "A public official shall not receive money or other valuables from a duty-

related public official". Of course, there are some exceptions such as a small gift offered in accordance with common practices and foods or convenience provided within the scope of conventional practices (Article 14). Citizens, however, would not understand what common practices or conventional practices actually imply. While the manual of the code of conduct for public officials published by ACRC in 2007 indicates that the gift or food less than \$30 are only allowable, some citizens offer more expensive gifts or meals to public officials as they believe it is socially acceptable. Therefore, anti-corruption policies should clearly delineate the condition in which gray corruption is illegal and let citizens know the guideline.

Trust and TGC relation should be carefully interpreted. Our analysis results suggest the positive relation of trust and TGC: the more generosity to gray corruption, the higher trust in the government institutes and high rank officials. Following this relation, citizens with higher trust in the government do not necessarily hold higher ethical standard to public officials. This finding suggests that gray corruption can be a medium to form trust in public officials. Such a distorted form of trust may support the "lubricant hypothesis" (Meon & Sekkat, 2005) or Guanxi in China, which justifies corruption as a tool for expediting social interactions. Even if government's gray corruption is serious, citizens with higher TGC may support the government only if they believe the corruption is socially acceptable. Given this situation, the efforts initiating a policy targeting gray corruption would gain less political support and demand high compliance cost of the policy. Therefore, TGC of citizens should be counted in designing the anti-corruption policy.

Korea has institutionalized many laws, anti-government agencies, and policies to control the grand corruption. Despite its efforts, citizens still concern the high level of corruption. This article suggests that the prevalent gray corruption is one possible reason. In future study, how to lower TGC should be studied more.

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[Appendix 1] Questionnaires for Influencing Factors to Grey Corruption

		Question	Measure
Demographic Variables	Gender	What is your gender?	0. Female 1. Male
	Age	How old are you?	Describe
	Education	What is your highest level of education?	1. Elementry School and Below 2. Middle School 3. High School 4. Colledge 5. University and Beyond
	Income	How much does your family earn a month? (average monthly income of whole family including bonus, interest and rent)	1. under 990 dollars 2. 1,000-1,490 dollars 3. 1,500-1,990 dollars ... 9. over 5,000 dollars
Gray Corruption Tolerance	What do you think about the activities below?		1. No Corruption 2. Weak Corruption 3. Moderate Corruption 4. Corruption 5. Serious Corruption
	Gift	A public official receives gifts worth 100 dollars from his/her subcontractor.	
		An employee of private company receives gifts worth 100 dollars from his/her subcontractor.	
	Favoritism	A local assemblyman gives his son a job at City Hall.	
		A local assemblyman gives a job at City Hall to his/her supporter.	
		A boss promotes his high school junior among candidates with similar qualifications.	
	Wedding Gift	A public official receives a 30-dollar-gift for his/her child's wedding from a duty-related party.	
		A public official receives a 100-dollar-gift for his/her child's wedding from a duty-related party.	
		An employee of private company receives a 100-dollar-gift for his/her child's wedding from a job-related party.	
	Giving to a Teacher	A teacher receives 100-dollar-gift card from a student's parents at Teacher's Day.	
		A teacher receives 100-dollar-gift card from a former student at Teacher's Day.	
	Holiday Gift	A public official receives 300 dollars from a related company to distribute among coworkers.	

		A public official receives 300 dollars from a related company to spend on managing the organization.	
		An employee of private company receives 300 dollars from a related company to distribute among coworkers.	
		An employee of private company receives 300 dollars from a related company to spend on managing the organization.	
	Rebate	A public official receives 5% rebate and uses it personally.	
		A public official receives 5% rebate and uses it for his/her organization.	
		An employee of private company receives 5% rebate and uses it personally.	
		An employee of private company receives 5% rebate and uses it for his/her organization.	
	Personal Use of Public Property	One makes a private long distance call with office phone.	
		One leaves office for a long time without notice for personal affairs	
Trust		How much do you trust or not trust the institutions or persons below?	
	Trust in Institutions	A. The Administration	1. Not at All
		B. The Legislature	2. Barely Trust
		C. The Judicature	3. Trust Sometimes
	Trust in the Elites	A. The President	4. Trust Usually
		B. Congress Members	5. Fully Trust
		C. High-ranking Officials	
Instrumental Variable	Political Orientation	How do you understand yourself in political perspective?	1. Very Progressive 2. Somewhat Progressive 3. Moderate 4. Somewhat Conservative 4. Very Conservative
	Satisfaction with the President	Are you satisfied with the national affairs carried out by the President?	1. Very Dissatisfied 2. Rather Dissatisfied 3. Normal 4. Satisfied 5. Fully Satisfied