

THE IMPACT OF THE 2008-2009 GLOBAL CRISIS ON CORRUPTION: EVIDENCE FROM MANUFACTURERS IN CENTRAL ASIA AND EASTERN EUROPE

HALIL D. KAYA

*PROFESSOR OF FINANCE, NORTHEASTERN STATE UNIVERSITY,
kaya@nsuok.edu*

ENGKU NGAH S. ENKUCHIK

*ASSISTANT PROFESSOR OF FINANCE, PRINCE SULTAN UNIVERSITY,
engkungah@psu.edu.sa*

Abstract

In this study, we examine how the 2008-2009 Global Crisis has affected the informal payments/gifts paid by manufacturing firms. We compare the crisis period to the post-crisis period and found that the manufacturing firms believed that the incidence of bribes went down significantly after the crisis ended. When we differentiate the firms with respect to size, structure, legal form, gender of the owners, gender of the top manager, and whether or not they held an international quality certification, we find that the results hold for almost all classifications of firms. When we go into more detail and examine the incidence of bribes in customs/imports, courts, and taxes/tax collection, we found similar results. In almost all categories of firms, the respondents saw a significant drop in the incidence of bribes in all of these areas (i.e. customs/imports, courts, and taxes/tax collection) after the crisis ended.

Keywords: *bribe, bribery, corruption, informal payment, manufacturing, global crisis, financial crisis*

Clasificare JEL: *E01, D72, D73*

1. Introduction and context of the study

In this study, we examine the impact of the 2008-2009 Global Crisis on the informal payments or gifts paid by manufacturing firms in 29 Eastern European and Central Asian countries, using the Business Environment and Enterprise Performance Surveys conducted in 2008 and 2013. These surveys are joint initiatives of the World Bank Group and the European Bank for Reconstruction and Development. We use the 2008 survey as our crisis-period survey, and the 2013 survey as our post-crisis period survey. The 2013 survey is the first survey that was conducted after the global crisis ended. We attempt to answer the question of whether these manufacturing firms believe that the incidence of bribes is significantly lower after the crisis ended. Aside from the general bribes, we also examine the incidence of the different kind of bribes in customs/imports, courts, and taxes/tax collection in all categories of firms during and post-crisis, i.e. with respect to size, structure, legal form, gender of the owners, gender of the top manager, and whether the firms hold an international quality certification.

Despite various definitions by different authors (see e.g. Leff, 1964; Mauro, 1998; Aidt, 2003; Drury, 2006; Glaeser, 2006; Misangyi, 2008; Anokhin and Schulze, 2009; Pellegrini, 2011), corruption is almost always associated with bureaucracy and interactions between businesses and citizens with government or public officials for their own personal gain, and is most prevalent when there are other forms of institutional inefficiency such as political instability, bureaucratic red tape, and weak legislative and judicial systems. Corruption also is perceived to be a more common phenomenon in developing countries compared to in developed economies, as shown in several papers which investigate and provide evidence of corruptions in developing economies, including Tanzi and Davoodi (1997), Leite and Weidmann (1999), Henderson and Kuncoro (2004), Kronenberg (2004), Kenny (2007), Osei-Tutu et al. (2010), and Kapur and Vaishnav (2013).

Our findings show that in general, bribes were more common during the crisis than the post-crisis period. Our findings seem robust even after we split the firms according to different size groups based on the number of employees (i.e. firms with five-to-nineteen employees, firms with twenty-to-ninety nine employees, and firms with more than ninety nine employees), based on whether they were a part of a larger firm or not, based on the different types of ownership or legal status (e.g. publicly traded, privately traded, sole proprietorship, partnership, limited partnership, and others), based on the gender of the owners or the top manager, and based on whether they hold an internationally recognized quality certification (i.e. ISO 9000, 9002, 14000, etc.). When we classify the bribes into separate types, i.e. in customs/imports, courts, and taxes/tax collection, we also find that in all three types of bribery, manufacturing firms believe that the incidence of bribery went down significantly post-crisis. In addition, the results hold for most classification of firms i.e. based on size, type of ownership or legal status, and owner's or top manager's gender.

The paper proceeds as follows: Section 2 discusses the previous literature. Section 3 explains our hypotheses. Section 4 describes the data. Section 5 shows the empirical results. Finally, Section 6 concludes.

2. Literature Review

Corruption is almost always associated with bureaucracy and interactions between businesses and citizens with government or public officials. Corruption has been defined as an extra-legal institution used by individuals or groups to gain influence over the actions of the bureaucracy (Leff, 1964). Others, such as Aidt (2003), Drury (2006), Glaeser (2006), and Pellegrini (2011) also define corruption along the same line, i.e. as the abuse of public offices or crime of public officials for their own private or personal gain. In other words, corruption is the behavior that violates the trust placed in public officials and services to undermine the foundation on which generalized interpersonal trust lies (Anokhin and Schulze, 2009). In this regard, Anokhin and Schulze (2009) argue that corruption undermines the foundations of institutional trust that are needed for the development of trade and entrepreneurial and innovative activity. According to Mauro (1998), corruption is most prevalent where there are other forms of institutional inefficiency, such as political instability, bureaucratic red tape, and weak legislative and judicial systems. Misangyi (2008), who examines corruption from an economic perspective, also defines it as the misuse of a position of authority for private or personal benefit, where misuse typically constitutes a breach of legal norms. On the other hand, Bennesen et al. (2009) differentiate between lobbying influence on government decisions, and corruption.

Corruption is thought to be a more common phenomenon in developing countries compared to in developed economies. A number of papers have investigated and provided evidence of corruptions in developing economies, including Tanzi and Davoodi (1997), Leite and Weidmann (1999), Henderson and Kuncoro (2004), Kronenberg (2004), Kenny (2007), Osei-Tutu et al. (2010), and Kapur and Vaishnav (2013). Kapur and Vaishnav (2013) for example demonstrate that increases and decreases in corruption are related to growth cycles and electoral cycles. Henderson and Kuncoro (2004) provide evidence of corruption among elected and local government officials who demand rents from firms to stay popular among the electorate, or because they have been underpaid. Some studies have identified two business sectors in which corruption is mostly prevalent, i.e. natural resources (land use) and capital projects or construction, e.g. in Kronenberg (2004). Leite and Weidmann (1999) suggest and show that there is a strong negative correlation between natural resource abundance and economic growth.

Kenny (2007) posits that the construction industry ranks as one of the largest sources of corruption, which is not limited to only bribery, but also to poor quality construction of infrastructure, generating a poor return on investment. Osei-Tutu et al. (2010) quote that huge

government projects provide the backdrop for countless areas of bribery which can include, but not limited to, contractors, government officials, public servants, consultants, surveyors, and suppliers. Tanzi and Davoodi (1997) point out that this level of corruption can enlarge the size and complexity of capital projects, reducing the productivity of the investment.

Bennedsen et al. (2009) address how the size of a firm impacts the level of corruption and bribery involving of natural resource or construction industries in developing countries. They find that strong firms use their influence to bend laws and regulations; whereas weak firms were more likely to pay bribes to mitigate the cost of government intervention. Their study seems to indicate that “strong” firms which consists of larger, older, export-oriented firms, with limited competition in the industry tend to have more influence on government decisions, and hence, less bribe paying. These firms also tend to have higher sales growth and better performance. On the other hand, “weak” firms tend to operate in more competitive environment, with lower growth in sales, and are more prone to exploitation by corrupt bureaucrats. There is also similar argument that corruption and bribery involving natural resource and construction can be beneficial in helping new entrants to circumvent excessive government regulation of entrepreneurial activity in developing economies, as suggested by Dreher and Gassebner (2013).

3. Hypotheses

Due to the deteriorated macroeconomic environment during the crisis, we expect a harsher competitive environment for the manufacturing firms in these countries. Therefore, we expect to see more bribes during this period. For the post-crisis period, we expect to see things to improve, therefore we expect to see less corruption after the crisis ended. Also, we expect the governments to curb down these types of activities over time. Therefore, our first hypothesis on the general incidence of bribery is as follows:

Hypothesis 1: For manufacturing firms, the overall incidence of bribes went down after the crisis ended.

With respect to bribery in different areas (i.e. customs/imports, courts, and taxes/tax collection), we expect the same. We expect to see a higher level of corruption during the crisis and we expect to see a decline after the crisis ended. Therefore, our hypotheses on bribery in these different areas are as follows:

Hypothesis 2: For manufacturing firms, the incidence of bribes in customs/imports went down after the crisis ended.

Hypothesis 3: For manufacturing firms, the incidence of bribes in courts went down after the crisis ended.

Hypothesis 4: For manufacturing firms, the incidence of bribes in taxes and tax collection went down after the crisis ended.

The next section describes our data and variables.

4. Data

Our sample consists of manufacturing firms across twenty-nine countries in Eastern Europe and Central Asia, including Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, FYR Macedonia, Georgia, Hungary, Kazakhstan, Kosovo, Kyrgyz Republic, Latvia, Lithuania, Moldova, Mongolia, Montenegro, Poland, Romania, Serbia, Slovak Republic, Slovenia, Tajikistan, Turkey, Ukraine, and Uzbekistan.

We use the Business Environment and Enterprise Performance Surveys conducted in 2008 and 2013 (<https://www.enterprisesurveys.org/en/enterprisesurveys>). These surveys are joint initiatives of the World Bank Group and the European Bank for Reconstruction and Development. The surveys are known as the BEEPSII and BEEPSIV surveys. We use the 2008 survey as our crisis-period survey, and the 2013 survey as our post-crisis period survey. The 2013 survey is the first survey that was conducted after the global crisis ended. These surveys include about 4,000 manufacturing firms, as shown in Table 1.

Table No. 1. Summary Statistics for Manufacturing Firms

	2008			2013		
	N	Mean	Std	N	Mean	Std
Panel A.						
Common to pay additional payments/gifts	4,038	2.09	1.33	3,884	1.86	1.12
Panel B.						
Pay to deal with customs/imports	3,807	1.66	1.18	3,701	1.51	0.96
Pay to deal with courts	3,786	1.54	1.07	3,693	1.44	0.90
Pay to deal with taxes and tax collection	4,013	1.77	1.18	3,793	1.64	1.03

Note:

In Panels A and B, Never is 1, Seldom is 2, Sometimes is 3, Frequently is 4, Usually is 5, Always is 6.

5. Empirical Results

Table 2 shows the results for the question “Is it common for manufacturers to pay additional payments/gifts?”. We compare the year 2008 answers to the year 2013 answers. The last column shows the p-values for the Mann-Whitney-Wilcoxon tests that compare the 2008 answers to the 2013 answers.

Table No. 2. Common for Manufacturers to Pay Additional Payments/Gifts?

Wilcoxon Test			
	2008	2013	p-value
all	2.09	1.86	<0.0001
employees5-19	2.09	1.91	0.0006
employees20-99	2.13	1.82	<0.0001
employees>99	2.06	1.80	<0.0001
part of a larger firm	2.04	1.94	0.2951
not part of a larger firm	2.10	1.86	<0.0001
shareholding firm trading in the stock market	2.20	1.63	0.0002
shareholding firm shares traded privately	2.06	1.87	<0.0001
sole proprietorship	2.11	1.92	0.0500
partnership	1.93	1.46	0.0158
limited partnership	2.15	1.38	0.0057
other	2.14	1.95	0.2817
one or more female owner	2.07	1.84	<0.0001
no female owner	2.11	1.88	<0.0001
top manager female	2.16	1.92	0.0045
top manager not female	2.09	1.85	<0.0001
firm without an intl recog. quality certification	2.14	1.88	<0.0001
firm with an intl recog. quality certification	1.98	1.82	0.0041

Note: Never is 1, Seldom is 2, Sometimes is 3, Frequently is 4, Usually is 5, Always is 6.

We are seeing that, for all firms, the mean value of the responses in 2008 is 2.09, while it is 1.86 in 2013. The difference between the responses in the crisis and post-crisis periods is statistically significant ($p < 0.0001$). Since “Never” is coded as 1, “Seldom” as 2, “Sometimes” as 3, “Frequently” as 4, “Usually” as 5, and “Always” as 6, a higher mean in 2008 (when compared to 2013) indicates that respondents believed that bribes were more common during the crisis period when compared to the post-crisis period. A score of 2.09 in 2008 falls somewhere between “Seldom” and “Sometimes”, while a score of 1.86 in 2013 falls somewhere between “Never” and “Seldom”. Therefore, we can conclude that bribes were more common during the crisis.

Responses are then grouped into different firm size groups (i.e. firms with five-to-nineteen employees, firms with twenty-to-ninety nine employees, and firms with more than ninety nine employees). As shown in Table 2 above, we are seeing that, in all size groups, respondents believed that bribes were more common during the crisis. For firms with five-to-nineteen employees, while the mean value is 2.09 during the crisis, it is 1.91 post-crisis ($p = 0.0006$). For firms with twenty-to-ninety nine employees, while the mean value is 2.13 during the crisis, it is 1.82 post-crisis ($p < 0.0001$). For firms with more than ninety nine employees, while the mean value is 2.06 during the crisis, it is 1.80 post-crisis ($p < 0.0001$).

By separating firms into whether they were a part of a larger firm or not part of a larger firm, we are seeing that respondents for the firms that are not part of a larger firm believed that bribes were more common during the crisis. For firms that are not part of a larger firm, while the mean value is 2.10 during the crisis, it is 1.86 post-crisis ($p < 0.0001$). For firms that are part of a larger firm, there is no significant difference between the crisis period and the post-crisis period. For this group, while the mean value is 2.04 during the crisis, it is 1.94 post-crisis ($p = 0.2951$).

Next, we are seeing that, except for the “other” group, for all groups, bribes were seen as more common during the crisis period when we differentiate the firms with respect to legal status (shareholding firm with shares trading in the market, shareholding firm with shares traded privately, sole proprietorship, partnership, etc.).

Is there any difference when we segregate firms with respect to the gender of their owners, or with respect to the gender of their top manager? We are seeing that owner’s gender does not make any difference, i.e. firms that have one or more female owner and firms with no female owner both believed that bribes were more common during the crisis. We are also seeing that top manager’s gender does not make any difference. Firms that have a female top manager and firms with a male top manager both believed that bribes were more common during the crisis.

Finally, when we differentiate the firms with respect to their holding of an internationally recognized quality certification (i.e. ISO 9000, 9002, 14000, etc.), we are seeing that holding a quality certification does not make any difference. Both groups believed that bribes were more common during the crisis.

To summarize, Table 2 shows that, in most categories of firms, the respondents believed that the incidence of bribes went down significantly after the crisis ended. This is true for most types of firms (based on size, legal status, owner or top manager’s gender, etc.).

Table 3 shows the results of the responses given to the question “Do manufacturers pay to deal with customs/imports?”

For all firms, we are seeing that the mean value of the responses in 2008 is 1.66, while it is 1.51 in 2013. The difference between the responses in the crisis and post-crisis periods is statistically significant ($p < 0.0001$). Since “Never” is coded as 1, “Seldom” as 2, “Sometimes” as 3, “Frequently” as 4, “Usually” as 5, and “Always” as 6, a higher mean in 2008 (when compared to

2013) indicates that respondents believed that bribes for customs/imports were more common during the crisis period when compared to the post-crisis period.

To summarize, Table 3 shows that, in most categories of firms, the respondents believed that the incidence of bribes in customs/imports went down significantly after the crisis ended. This is true for most types of firms (based on size, legal status, owner or top manager’s gender, etc.).

Table No. 3. Manufacturers Pay to Deal With Customs/Imports?

Wilcoxon Test			
	2008	2013	p-value
all	1.66	1.51	<0.0001
employees5-19	1.60	1.49	0.1255
employees20-99	1.68	1.50	0.0045
employees>99	1.70	1.54	0.0035
part of a larger firm	1.64	1.54	0.1418
not part of a larger firm	1.66	1.51	<0.0001
shareholding firm trading in the stock market	1.77	1.46	0.0237
shareholding firm shares traded privately	1.66	1.52	0.0001
sole proprietorship	1.61	1.46	0.0196
partnership	1.48	1.49	0.4869
limited partnership	1.59	1.38	0.3934
other	1.47	1.51	0.2230
one or more female owner	1.64	1.45	0.0001
no female owner	1.67	1.54	0.0037
top manager female	1.68	1.45	0.0032
top manager not female	1.65	1.52	0.0002
firm without an intl recog. quality certification	1.64	1.48	0.0001
firm with an intl recog. quality certification	1.67	1.56	0.0270

Note: Never is 1, Seldom is 2, Sometimes is 3, Frequently is 4, Usually is 5, Always is 6.

Table 4 shows the results of the responses given to the question “Do manufacturers pay to deal with courts?”.

We are seeing that, for all firms, the mean value of the responses during the crisis in 2008 is 1.54, while it is 1.44 in 2013 (post-crisis). The difference between the responses in the crisis and post-crisis periods is statistically significant ($p=0.0004$). A higher mean in 2008 (when compared to 2013) indicates that respondents believed that bribes in courts were more common during the crisis period when compared to the post-crisis period.

To summarize, Table 4 shows that, in most categories of firms, the respondents believed that the incidence of bribes in courts went down significantly after the crisis ended. This is true for most types of firms (based on size, legal status, owner or top manager’s gender, etc.).

Table No. 4. Manufacturers Pay to Deal With Courts?

Wilcoxon Test			
	2008	2013	p-value
all	1.54	1.44	0.0004
employees5-19	1.55	1.43	0.0070
employees20-99	1.54	1.45	0.1167
employees>99	1.54	1.43	0.0304
part of a larger firm	1.51	1.41	0.1315
not part of a larger firm	1.55	1.44	0.0007
shareholding firm trading in the stock market	1.68	1.33	0.0208
shareholding firm shares traded privately	1.51	1.44	0.0219
sole proprietorship	1.65	1.48	0.0137
partnership	1.55	1.31	0.1025
limited partnership	1.36	1.19	0.4816
other	1.51	1.39	0.2499
one or more female owner	1.54	1.39	0.0005
no female owner	1.54	1.47	0.0385
top manager female	1.60	1.37	0.0008
top manager not female	1.53	1.45	0.0083
firm without an intl recog. quality certification	1.56	1.41	<0.0001
firm with an intl recog. quality certification	1.51	1.47	0.3769

Note: Never is 1, Seldom is 2, Sometimes is 3, Frequently is 4, Usually is 5, Always is 6.

Table 5 below shows the results of the responses given to the question “Do manufacturers pay to deal with taxes and tax collection?”.

We are seeing that, for all firms, the mean value of the responses in 2008 is 1.77, while it is 1.64 in 2013. The difference between the responses in the crisis and post-crisis periods is statistically significant ($p < 0.0001$). A higher mean in 2008 (when compared to 2013) indicates that respondents believed that bribes in taxes/tax collection were more common during the crisis period when compared to the post-crisis period.

To summarize, Table 5 shows that, in most categories of firms, the respondents believed that the incidence of bribes in taxes/tax collection went down significantly after the crisis ended. This is true for most types of firms (based on size, legal status, owner or top manager’s gender, etc.).

Table No. 5. Manufacturers Pay to Deal With Taxes and Tax Collection?

Wilcoxon Test			
	2008	2013	p-value
all	1.77	1.64	<0.0001
employees5-19	1.80	1.65	0.0004
employees20-99	1.80	1.66	0.0145
employees>99	1.71	1.60	0.0963
part of a larger firm	1.59	1.69	0.0897
not part of a larger firm	1.79	1.64	<0.0001
shareholding firm trading in the stock market	1.89	1.66	0.0647
shareholding firm shares traded privately	1.73	1.64	0.0125
sole proprietorship	1.88	1.70	0.0539
partnership	1.81	1.40	0.0138
limited partnership	1.70	1.31	0.0828
other	1.71	1.54	0.3504
one or more female owner	1.73	1.57	0.0008
no female owner	1.80	1.69	0.0023
top manager female	1.83	1.65	0.0042
top manager not female	1.76	1.64	0.0008
firm without an intl recog. quality certification	1.81	1.66	<0.0001
firm with an intl recog. quality certification	1.67	1.60	0.1857

Note: Never is 1, Seldom is 2, Sometimes is 3, Frequently is 4, Usually is 5, Always is 6.

6. Conclusions

Corruption is almost always associated with bureaucracy and interactions between businesses and citizens with government or public officials for their own personal gain, and is most prevalent when there are other forms of institutional inefficiency such as political instability, bureaucratic red tape, and weak legislative and judicial systems (see e.g. Leff, 1964; Mauro, 1998; Aidt, 2003; Drury, 2006; Glaeser, 2006; Misangyi, 2008; Anokhin and Schulze, 2009; Pellegrini, 2011). Others, e.g. Bennisen et al. (2009) differentiate between firms having strong lobbying influence on government decisions versus firms which are involved in corruption due to less political influence. Corruption also is perceived to be a more common phenomenon in developing countries compared to in developed economies, as shown in several papers which investigate and provide evidence of corruptions in developing economies, including Tanzi and Davoodi (1997), Leite and Weidmann (1999), Henderson and Kuncoro (2004), Kronenberg (2004), Kenny (2007), Osei-Tutu et al. (2010), and Kapur and Vaishnav (2013).

In this study, we examine the impact of the 2008-2009 Global Crisis on the informal payments or gifts paid by manufacturing firms in 29 Eastern European and Central Asian countries, using the Business Environment and Enterprise Performance Survey (i.e. BEEPSII and BEEPSIV surveys). We compare such perception during and after the crisis to answer the question of whether the incidence of bribes is different between the two periods. In addition to examining the incidence of bribes in general, we also examine the incidence of bribes in customs/imports, courts, and taxes/tax collection in all categories of firms pre- and post-crisis. In all four cases, we group the manufacturing firms with respect to size, structure, legal form, gender of the owners, gender of the top manager, and whether the firms hold an international quality certification, and examine whether the perception of bribery differ across groups during the two periods.

We begin by examining the general incidence of bribes as perceived by the manufacturing

firms in the 29 countries during and post-crisis. In general, respondents believed that bribes more common during the crisis than post-crisis. As we break the bribes down into customs/imports, courts, and taxes/tax collection, the results persist.

We categorize the firms according to different size group based on the number of employees (i.e. firms with five-to-nineteen employees, firms with twenty-to-ninety nine employees, and firms with more than ninety nine employees), we find that across all size groups, respondents believed that bribes in general and in taxes/tax collection were more common during the crisis. However, for customs/imports and courts, bribes were more common during the crisis in two of the three groups (i.e. the first two groups for customs/imports, and the largest and the smallest for courts).

Next, we also examine perception of bribery by separating the manufacturing firms into whether they were a part of a larger firm or not part of a larger firm, we find that respondents for firms that are not part of a larger firm believed that bribes were more common during the crisis for all cases of general bribes, customs/imports, courts, and taxes/tax collection. However, for firms that are part of a larger firm, there is no significant difference between the crisis period and the post-crisis period except for taxes/tax collection, for which this group believed that bribes in taxes/tax collection were more common post-crisis.

In addition, we separate firms via different types of ownership or legal status such as publicly traded on a stock exchange, privately traded, sole proprietorship, partnership, limited partnership or others. We find that for the general bribes and taxes/tax collections, except for the “other” group, bribes were perceived as more common during the crisis. As for customs/imports and courts, bribes were perceived to be more common during the crisis except for the “partnership” and “other” groups.

Is there is any difference when the manufacturing firms are segregated with respect to the gender of their owners, and with respect to the gender of their top manager? We find that owner’s gender does not make any difference, i.e. firms that have one or more female owner and firms with no female owner both believed that bribes were more common during the crisis for all cases of general bribes, customs/imports, courts, and tax/tax collection. Similarly, we find that top manager’s gender does not make any difference. Firms that have a female top manager and firms with a male top manager both believed that bribes were more common during the crisis for all categories of bribes.

Also, we differentiate the firms with respect to their holding of an internationally recognized quality certification (i.e. ISO 9000, 9002, 14000, etc.). We find that for cases of general bribes and customs/imports, holding a quality certification does not make any difference between the two groups, i.e. both groups believed that bribes were more common during the crisis. However, for courts and tax/tax collection, only firms that are not holding a quality certification believed that bribes were more common during the crisis.

Therefore, overall, we find that manufacturing firms believe that the incidence of bribery went down significantly post-crisis. In general, this is true for all types of bribes (i.e. general bribes, customs/imports, courts, and taxes/tax collection), and for most types of firms (based on size, legal status, owner or top manager’s gender, etc.), except for a few cases of differences with regard to firms with or without an internationally recognized quality certification.

Corruption is a significant problem, especially in developing or less developed countries. This current study shows that, for manufacturing firms, corruption is even more common during hard economic times. We suggest that officials in these countries should continuously watch for signs of economic distress and that they should act fast and take precautions (i.e. increase monitoring, for example) if an economic crisis is on the horizon.

While the 2008-2009 Global Crisis started as a financial crisis, it continued as an economic crisis that affected most businesses and households. Currently, we are again in an economic crisis, but this one originated as a health-related crisis. Although the origins of these two global crises are different, they both affected most businesses and households. Future studies may focus on how this most recent crisis (i.e. the Covid-19 crisis) has affected the level of corruption in developing/less developed countries. If, similar to our study, they find evidence of a strong relationship between this current economic crisis and corruption, this will mean that, regardless of the origin of the crisis, any global economic crisis may cause corruption to go up in these countries. These future studies may also examine whether countries that have suffered the most in this health-related crisis experienced the most dramatic increase in the level of corruption. In other words, does the severity of an economic crisis in different countries have different impacts on corruption? This would be an additional, important contribution by these future studies.

7. Bibliography

- [1] **Aidt, T. S.** (2003). Economic analysis of corruption: A survey, *The Economic Journal*, 113(491), 632-652.
- [2] **Anokhin, S., and Schulze, W. S.** (2009). Entrepreneurship, innovation, and corruption, *Journal of Business Venturing*, 24(5), 465-476.
- [3] **Bennedsen, M., Feldmann, S. E., and Lassen, D. D.** (2009). Strong firms lobby, weak firms bribe: A survey-based analysis of the demand for influence and corruption, *EPRU working paper series 2009-08*, Department of Economics, University of Copenhagen.
- [4] **Dreher, A., and Gassebner, M.** (2013). Greasing the wheels? The impact of regulations and corruption on firm entry. *Public Choice*, 155(3-4), 413-432.
- [5] **Drury, A. C., Kriekhaus, J., and Lusztig, M.** (2006). Corruption, democracy, and economic growth, *International Political Science Review*, 27(2), 121-136.
- [6] **Glaeser, E. L., and Saks, R. E.** (2006). Corruption in America, *Journal of Public Economics*, 90(6), 1053-1072.
- [7] **Henderson, J. V., and Kuncoro, A.** (2004). Corruption in Indonesia, *NBER Working Paper 10674*, National Bureau of Economic Research.
- [8] **Kapur, D., and Vaishnav, M.** (2013). Quid pro quo: Builders, politicians, and election finance in India. Kapur, Devesh and Vaishnav, Milan, Quid Pro Quo: Builders, Politicians, and Election Finance in India, *Center for Global Development Working Paper No. 276*.
- [9] **Kenny, C.** (2007). Construction, Corruption, and Developing Countries, *Policy Research Working Paper Series 4271*, The World Bank.
- [10] **Kronenberg, T.** (2004). The curse of natural resources in the transition economies. *Economics of Transition*, 12(3), 399-426.
- [11] **Leff, N. H.** (1964). Economic development through bureaucratic corruption, *American Behavioral Scientist*, 8(3), 8-14.

- [12] **Leite, C., and Weidmann, J.** (1999). Does mother nature corrupt? Natural resources, corruption, and economic growth, *IMF Working Paper No. 99/85*.
- [13] **Mauro, P.** (1998). Corruption: causes, consequences, and agenda for further research, *Finance and Development*, 35(1), 11-14.
- [14] **Misangyi, V. F., Weaver, G. R., and Elms, H.** (2008). Ending corruption: The interplay among institutional logics, resources, and institutional entrepreneurs, *Academy of Management Review*, 33(3), 750-770.
- [15] **Osei-Tutu, E., Badu, E., and Owusu-Manu, D.** (2010). Exploring corruption practices in public procurement of infrastructural projects in Ghana, *International Journal of Managing Projects in Business*, 3(2), 236-256.
- [16] **Pellegrini, L.** (2011). Economic analysis of corruption, in *Corruption, Development and the Environment*, Netherlands: Springer, 13-27.
- [17] **Tanzi, V., and Davoodi, H. R.** (1997). Corruption, Public Investment, and Growth, *IMF Working Paper No. 97/139*.