

# Did Corruption Decrease Post-Crisis? The Case of Wholesalers across Less-Developed Economies

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## *Abstract*

*This study examines informal payments/gifts paid by wholesalers during and post-crisis periods. We find that bribes were less frequent for wholesalers in general, post-crisis. The results hold for certain groups of wholesalers when they are classified with respect to structure, size, structure, legal form, and owner and manager's gender. However, we do not find much evidence of significant difference between the crisis and post-crisis period in terms of the incidence of bribes when we categorize them into customs/imports, courts, and taxes.*

**Keywords:** global crisis, corruption, bribes, bribery, gift, informal payment, wholesaler

## **JEL classification:**

**DOI:** 10.24818/RMCI.2021.4.570

## **1. Introduction**

Corruption is commonly perceived in developing and less developed economies and is almost always associated with making informal payments or gifts when dealing with bureaucracy or during interactions between businesses and citizens with government or public officials. This phenomenon is expected to be more common during harsher economic conditions such as a crisis, compared to a normal period.

Campos and Giovannoni (2007, 2008), Bennedsen et al. (2009), and Harstad and Svensson (2011) suggest that corruption is different from lobbying and is related to firm size. Bennedsen et al. (2009) also suggest that firms that rely on large government contracts may be more inclined to be involved in bribery than firms that deal primarily with the private sector. In this regard, Campos and Giovannoni (2007, 2008) show that larger firms lobby, whereas smaller firms are systematically associated with corruption. Interestingly, Svensson (2005) suggests that more profitable companies are targeted at higher rates (of bribe) regardless of size.

Evidence of corruption in developing countries has also been provided by e.g. Harstad and Svensson (2011), Mauro (1998), Svensson (2003) and Tonoyan et

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al. (2010). For example, both Tonoyan et al. (2010) and Mauro (1998) suggest that government intervention results in more corruption. In addition, Svensson (2003) finds that as long as firms need to deal with some government officials to get things done in e.g. exporting and importing, the likelihood of bribery incidences increases.

In this study, we address several related questions in terms of the perception of bribes among wholesalers in Eastern Europe and Central Asia, including whether the overall incidence of bribes decline after a crisis. We also investigate whether corruption in courts, customs, or taxes decline after the crisis ended. We expect to find more frequent corruption by wholesalers during severe and unfavorable economic conditions such as during a crisis. However, as the economy improves after a crisis, fewer bribe incidences are expected. The results of this study show that respondents in wholesale companies believed that corruption declined after the crisis. However, in this study, we show that the results hold only for certain groups of wholesalers.

Section 2 discusses the previous literature. Section 3 explains the hypotheses. Section 4 describes our data. Section 5 shows the results. Finally, Section 6 presents our conclusions.

## **2. Literature Review**

Generally, corruption involves individuals or groups attempting to gain advantage when dealing with the government officials for their own personal benefit (e.g. Mauro, 1998; Glaeser, 2006; and Pellegrini, 2011). Several authors (Kaufman and Vicente, 2005; Bennedsen et al., 2009; and Harstad and Svensson, 2011) distinguish between corruption and lobbying. In other words, they argue that bribery to bend the rules is a form of illegal corruption, whereas the ability of private parties to lobby or affect legislation through campaign contributions is not (a form of legal corruption).

Bennedsen et al. (2009) posit that firms that rely on government contracts and “weak” firms (smaller firms in competitive industry) may be more involved in bribery to mitigate the cost of government intervention, while firms that sell primarily to the private sector and “strong” firms (larger, older, export-oriented firms in less competitive industry) tend to use their influence to change laws and regulations and pay less bribes. Harstad and Svensson (2011), also show that firms are most likely to bribe when their level of capital is small, whereas larger firms lobby. Further evidence is provided by Campos and Giovannoni (2007, 2008), who show that larger firms are systematically associated with lobbying, whereas smaller firms, with corruption. On the other hand, Mbaku (1996) shows that firms allocate more resources for bribery and lobbying in order to eliminate competition from smaller firms.

Other papers suggest that the incidence of corruption is perceived to be more prevalent in less developed economies due to their centralized economic system and higher level of government intervention; or whenever there are

restrictions imposed by the government involving trade, subsidies, tax deductions, price controls, foreign exchange and provisions of credit; or when firms cannot bypass the red tape and have to deal with government officials to get things done in e.g. exporting, importing and requesting public infrastructure services (see e.g. Tonoyan et al., 2010; Mauro, 2013, and Svensson, 2003).

Svensson (2005) suggests that the amount of bribe involved is positively related to profitability or the firm's ability to pay – i.e. the more profitable a firm is, the more it needs to pay – which works against smaller businesses when competing against larger entities. However, there is also argument that corruption and bribery may be beneficial in helping new entrants to circumvent excessive government regulation of entrepreneurial activity in developing economies, as well as to encourage entrepreneurial growth, as suggested by Dreher and Gassebner (2013), Gould and Amaro-Reyes (1983), and Jain (2001). Therefore, it is not all negative.

### 3. Hypotheses

The unfavorable macroeconomic environment created during a crisis period gives us reason to believe that more wholesalers will engage in corruption. We expect less corruption to occur during the post-crisis period when the macroeconomic environment has improved significantly (along with government efforts to reduce corruption over time). We expect a similar decline in corruption in different areas including courts, customs and taxes. In other words, we expect to find a decline in corruption after the crisis ended.

In this study, we have four hypotheses related to corruption among wholesalers in Eastern Europe and Central Asia. These are:

*Hypothesis 1: For wholesalers, corruption in general declined after the global crisis ended.*

*Hypothesis 2: For wholesalers, corruption in customs declined after the global crisis ended.*

*Hypothesis 3: For wholesalers, corruption in courts declined after the global crisis ended.*

*Hypothesis 4: For wholesalers, corruption in taxes declined after the global crisis ended.*

To answer the above questions, we compare the mean scores between 2008 and 2013, and employ the Mann-Whitney-Wilcoxon test to assess any differences in perception of bribes during the crisis and post-crisis periods.

### 4. Data

We use the Business Environment and Enterprise Performance Surveys (i.e. Surveys II and IV) to analyze the crisis period (2008) and the post-crisis period (2013). As shown in Table 1, the surveys include about 700 firms in 2008 and 900 firms in 2013. The sample in this study comprises wholesalers from twenty-nine countries in these regions.

## Summary Statistics

**Table 1**

	2008			2013		
	N	Mean	Std	N	Mean	Std
<b>Panel A.</b>						
Common to pay additional payments/gifts	701	2.06	1.29	891	1.89	1.12
<b>Panel B.</b>						
Pay to deal with customs/imports	671	1.66	1.20	874	1.59	1.00
Pay to deal with courts	661	1.54	1.06	869	1.49	0.93
Pay to deal with taxes and tax collection	683	1.71	1.18	877	1.68	1.06

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

## 5. Empirical Results

Table 2 compares the responses given to the following question: “Is it common for wholesalers to pay additional payments/gifts?”. The means for 2008 and 2013 and the p-values for the comparisons (i.e. Mann-Whitney-Wilcoxon) are shown in the table.

In 2008, the mean response for all firms in the sample is 2.06. In 2013, this value is 1.89. The difference between the responses during the crisis and post-crisis periods is statistically significant, which indicates that bribery seems to be less common in 2013.

**Common for Wholesalers to Pay Additional Payments/Gifts?**

**Table 2**

Category	Group	2008	2013	p-value
All	All wholesalers	2.06	1.89	0.0173**
Size	Employees5-19	2.02	1.88	0.1050
	Employees20-99	2.08	1.87	0.0370**
	Employees>99	2.10	1.83	0.2319
Part of larger firm	Part of a larger firm	1.93	1.95	0.4006
	Not part of a larger firm	2.07	1.88	0.0097***
Legal status	Shareholding firm trading in the stock market	1.86	1.10	0.0170**
	Shareholding firm shares traded privately	2.02	1.91	0.1521
	Sole proprietorship	2.07	1.83	0.2026
	Partnership	2.38	1.70	0.1274
	Limited partnership	2.17	3.00	0.1358
	Other	2.32	1.57	0.0408**
Female owner/manager	One or more female owner	2.04	1.85	0.0762*
	No female owner	2.09	1.91	0.0355**
	Top manager female	2.05	1.82	0.1038
	Top manager not female	2.06	1.91	0.0435**

Category	Group	2008	2013	p-value
Quality certification	Firm without an international quality certification	2.08	1.91	0.0373**
	Firm with an international quality certification	2.02	1.84	0.1511

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

\*\*\* denotes significance at 99% confidence level, \*\* denotes significance at 95% confidence level, while \* denotes significance at 90% confidence level, based on the Wilcoxon test.

The respondents from some of the groups also believed that bribes were more common during the crisis. These groups included wholesalers with twenty-to-ninety-nine employees; wholesalers that are not part of a larger firm; wholesalers with shareholding firms traded on the stock market and other groups; wholesalers with both one or more female owners or with no female owner; wholesalers with male owners; and wholesalers without an international quality certification. For all the other groups, we find that the difference between 2008 and 2013 is insignificant.

To summarize, the results for the subgroups of firms are mixed. The table shows that corruption declined post-crisis according to the firms with twenty-to-ninety-nine employees, the standalone firms, the shareholding firms trading in the market, the “other” legal status firms, the firms with one or more female owner or no female owner, the firms with a male top manager, and the firms without an international quality certification. For all other subgroups, there seems to be no significant change in the general corruption level post-crisis.

We also question if the perception of the incidence of bribes is equal across the different categories i.e. related to customs/imports, courts, and taxes/tax collections? Table 3 shows the results for corruption in customs. For all wholesalers, the mean value is 1.66 in 2008 and 1.59 in 2013 ( $p=0.4478$ ), which implies that the difference is statistically insignificant. In other words, bribes in customs were seen as equally common in 2008 and in 2013 from the perspective of the wholesalers. The table also shows that there is no significant difference for any subgroup of firms.

#### Corruption associated with Customs/Imports?

Table 3

Category	Group	2008	2013	p-value
All	All wholesalers	1.66	1.59	0.4478
Size	Employees5-19	1.69	1.58	0.3447
	Employees20-99	1.60	1.55	0.4283
	Employees>99	1.69	1.50	0.4323
Part of larger firm	Part of a larger firm	1.70	1.64	0.4309
	Not part of a larger firm	1.65	1.58	0.4141

Category	Group	2008	2013	p-value
Legal status	Shareholding firm trading in the stock market	1.44	1.22	0.2574
	Shareholding firm shares traded privately	1.63	1.60	0.3916
	Sole proprietorship	1.61	1.53	0.4968
	Partnership	1.91	1.48	0.3730
	Limited partnership	1.93	1.00	0.1609
	Other	1.75	1.36	0.3275
Female owner/manager	One or more female owner	1.57	1.59	0.2509
	No female owner	1.71	1.58	0.2697
	Top manager female	1.65	1.59	0.3028
	Top manager not female	1.66	1.59	0.4951
Quality certification	Firm without an international quality certification	1.66	1.59	0.4375
	Firm with an international quality certification	1.67	1.57	0.4696

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

\*\*\* denotes significance at 99% confidence level, \*\* denotes significance at 95% confidence level, while \* denotes significance at 90% confidence level, based on the Wilcoxon test.

Table 4 shows the results for corruption in courts. For all wholesalers, the mean value of the responses in 2008 is 1.54, while it is 1.49 in 2013. The difference is insignificant. These results seem to indicate that bribes in courts were seen as equally common in 2008 and in 2013. Even when the wholesalers were differentiated with respect to size, structure, legal form, gender of the owners, gender of the top manager, etc., we do not detect any significant difference between the responses in 2008 and 2013, except from respondents from shareholding firms trading in the market (with a mean value of 1.60 in 2008 and 1.00 in 2013). Therefore, bribes were perceived as equally common in 2008 and in 2013 for almost all groups of wholesalers.

#### Wholesalers Pay to Deal with Courts?

Table 4

Category	Group	2008	2013	p-value
All	All	1.54	1.49	0.4044
Size	Employees5-19	1.52	1.50	0.4078
	Employees20-99	1.55	1.47	0.2114
	Employees>99	1.58	1.41	0.2995
Part of larger firm	Part of a larger firm	1.49	1.45	0.4846
	Not part of a larger firm	1.55	1.50	0.3934
Legal status	Shareholding firm trading in the stock market	1.60	1.00	0.0381**

Category	Group	2008	2013	p-value
	Shareholding firm shares traded privately	1.53	1.50	0.4400
	Sole proprietorship	1.58	1.61	0.3118
	Partnership	1.74	1.50	0.2857
	Limited partnership	1.47	1.00	0.2394
	Other	1.64	1.21	0.1604
Female owner/manager	One or more female owner	1.46	1.48	0.1948
	No female owner	1.60	1.50	0.1628
	Top manager female	1.51	1.50	0.2305
	Top manager not female	1.55	1.49	0.2884
Quality certification	Firm without an international quality certification	1.58	1.52	0.3188
	Firm with an international quality certification	1.46	1.42	0.3670

*Note:* Never is 1, Seldom is 2, Sometimes is 3, Frequently is 4, Usually is 5, Always is 6. \*\*\* denotes significance at 99% confidence level, \*\* denotes significance at 95% confidence level, while \* denotes significance at 90% confidence level, based on the Wilcoxon test.

Table 5 shows the results for corruption in taxes. For all wholesalers, the mean is 1.71 in 2008 and 1.68 in 2013. The difference is statistically insignificant. These results indicate that bribes in taxes were seen as equally common in 2008 and in 2013. When we differentiate the wholesalers with respect to size, structure, legal form, gender of the owners, gender of the top manager, etc., we do not find any significant difference between the responses in 2008 and 2013. Therefore, all groups believed that bribes in taxes/tax collection were equally common in 2008 and in 2013.

#### Wholesalers Pay to Deal with Taxes and Tax Collection?

**Table 5**

Category	Group	2008	2013	p-value
All	All	1.71	1.68	0.3628
Size	Employees5-19	1.70	1.67	0.4222
	Employees20-99	1.76	1.73	0.4487
	Employees>99	1.65	1.52	0.4553
Part of larger firm	Part of a larger firm	1.61	1.58	0.4182
	Not part of a larger firm	1.72	1.69	0.3343
Legal status	Shareholding firm trading in the stock market	1.41	1.11	0.1510
	Shareholding firm shares traded privately	1.70	1.69	0.2680
	Sole proprietorship	1.73	1.73	0.4761
	Partnership	1.55	1.62	0.3596
	Limited partnership	2.00	2.00	0.4685
	Other	1.69	1.36	0.3338

Category	Group	2008	2013	p-value
Female owner/manager	One or more female owner	1.65	1.63	0.4114
	No female owner	1.76	1.71	0.4834
	Top manager female	1.70	1.67	0.3397
	Top manager not female	1.71	1.68	0.4207
Quality certification	Firm without an international quality certification	1.77	1.72	0.4177
	Firm with an international quality certification	1.58	1.56	0.2209

*Note:* Never is 1, Seldom is 2, Sometimes is 3, Frequently is 4, Usually is 5, Always is 6.  
 \*\*\* denotes significance at 99% confidence level, \*\* denotes significance at 95% confidence level, while \* denotes significance at 90% confidence level, based on the Wilcoxon test.

## 6. Conclusion

In this study, we examine how the level of corruption changed among wholesalers in Eastern Europe and Central Asia due to the 2008 global crisis. Corruption is a more common phenomenon in developing economies. This phenomenon is expected to be more common during harsher economic conditions such as a crisis as compared to a normal period. In this study, we find a statistically significant difference between the responses during the crisis and post-crisis periods which indicates that corruption was more common during the crisis period, when compared to the post-crisis period.

The results hold for certain groups of wholesalers. These groups include wholesalers with twenty-to-ninety-nine employees; standalone firms; wholesalers with shareholding firms traded on the stock market and other group; wholesalers with both one or more female owners or with no female owner; wholesalers with male owners; and wholesalers without an international quality certification.

However, when we examine the level of corruption in each subcategory (i.e. customs, taxes, and courts), we do not find any significant change post-crisis. In other words, although the overall level of corruption had significantly changed post-crisis, there was no significant change in each subcategory. Overall, this study shows that corruption related to wholesalers in these regions was more serious during the 2008 crisis when compared to the post-crisis period.

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