Informal Economy and Institutional Quality

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Abstract. This paper examines the relationship between different dimensions of institutional quality and informal sector size using a large dataset covering 140 countries. It included the most recent data (from the year 2019) of informal sector size (measured as a percent of GDP) and several different institutional quality variables, which include corruption control, law and order, bureaucracy quality, military in politics, democratic accountability, ethnic tensions, and religious tensions. A simple correlation analysis indicates that the correlation of informality with law and order, corruption control, bureaucracy quality, and military in politics is most significant. These results help to identify which dimensions of institutional quality are more relevant to account for the variation in the informal sector size.

Keywords: Informal Sector; Corruption; Bureaucracy; Law and Orde.

1. Introduction

In this paper, I investigate the relationship between institutional quality and informal sector size using a large dataset covering 140 countries. I use the most recent data of informal sector size (measured as a percent of GDP) and several different institutional quality variables, which include corruption control, law and order, bureaucracy quality, military in politics, democratic accountability, ethnic tensions, and finally, religious tensions. A simple correlation analysis indicates that the correlation of informality with law and order, corruption control, bureaucracy quality, and military in politics is most significant. These results help to identify which dimensions of institutional quality are more relevant to account for the variation in the informal sector size.

The current paper is related to several studies in the existing literature. For example, in their paper titled ‘‘Is the devil in the shadow? The effect of institutional quality on income’’ Jahan, Pavlik and Williams (2020) show that when the government tries to transform the unofficial economy to the official one by improving the institutional quality, it will decrease the informal economy, however, it will improve the overall productivity and increase the official income. In another paper, Razmi, Fahari and Montazerri (2013) indicate that the government is the most important factor to control the freedom and choice in the formal sector. The authors conclude a statistically negative relationship between the mentioned institutional quality indicators and size of the underground economy, which means the larger size of institutional quality (i.e. better and higher quality of institutions overall), the smaller size of the underground economy. In yet another paper Callais, Jahan and Pavlik (2021) argue that a fraction of people think that the informal economy is a result of underdevelopment, however, other people think that it caused the economy to hardly develop. According to this paper, the informal economy is important especially in some small towns. Next, according to Elgin and Oztunali (2014), institutional quality significantly interacts with the relationship between informal sector size and economic development. Particularly, the authors argue that a higher GDP per capita is associated with a larger informal sector size in countries where the institutional quality is low. The opposite is true in countries with good institutions. Also related to this research, La Porta and Shleifer (2014) illustrate that informality plays an important role in most developing countries. It provides many jobs for their people, however it is ineffective. The main reason for the informality is to avoid the taxes. With the development of the government, the formal will replace the informal. Finally, in a World Bank research brief, Loayza (2018) shows that informality is usually appearing in the developing countries as the sign of lacking economic development, however, if there is not informality, the unemployment will increase, poverty and crime. To reduce it, the reform must include all areas. There are lots of benefits of a formalized economy.

Closely related to the literature, in this paper, I examine the correlations between different institutional quality variables and informal sector size. Through this analysis, I am able to identify significant correlation between specific dimensions of institutional quality and informality.

The rest of the paper is organized as follows. In Section 2, I describe my data and its sources as well as the empirical methodology I use in the paper. In Section 3, I present the results of my empirical analysis. Finally, in Section 4 I provide a short discussion and conclusion.

2. Data and Methods

2.1 Data

In this subsection I describe the data series and their sources. To this end, Table 1 below provides descriptive summary statistics of all data series used in the empirical correlation analysis.

Table 1. Descriptive Summary Statistics

Variable	Mean	Median	Standard Deviation	Minimum	Maximum
Informal Sector (% GDP)	27.73	26.9	11.23	8.00	63.40
Corruption Control	2.79	2.50	1.16	0.50	5.50
Bureaucratic Quality	2.31	2.00	1.05	0.00	4.00
Law and Order	3.65	3.50	1.24	1.00	6.00
Democratic Accountability	4.24	4.46	1.43	0.50	6.00
Ethnic Tensions	3.92	4.00	1.18	1.00	6.00
Military in Politics	3.90	4.00	1.59	0.50	6.00
Religious Tensions	4.47	5.00	1.27	1.00	6.00

I obtained an informal sector size as % GDP from Elgin (2020). This is the most recent data series for each country in the year 2019. Next, I have chosen the following institutional quality variables, which are obtained from the International Country Risk Guide of Political Risk Services: Corruption control, law and order, bureaucracy quality, military in politics, democratic accountability, ethnic tensions and, religious tensions. For all variables, a larger value is associated with better institutions. For example, if country A has a larger ethnic tensions value than country B, it means that there are less ethnic tensions in country A.

2.2 Methods

As the empirical methodology of the paper, I used a correlation analysis. I will calculate the correlation coefficients between informal sector size and all institutional quality variables. To visually illustrate the correlations, I will also plot informal sector size against each institutional quality variable in a scatter plot diagram. In each scatter plot, I also include the simple trendline arising from a simple regression line.

As well-known correlation coefficients take values between -1 and 1. A positive correlation between two variables implies that the two variables are positively correlated, that is they generally move in the same direction. On the contrary, A negative correlation between two variables implies that the two variables are negatively correlated, that is they generally move in the opposite direction. Finally, zero or close to zero correlation suggests that the two variables are not really related to each other.

3. Empirical Results

Figure 1 illustrates the correlation between informal sector size (as % GDP) and corruption control. The calculated correlation coefficient is -0.67. This highly significant and negative correlation indicates that in countries where the corruption control variable takes larger values, informal sector

size is relatively larger. In other words, based on these results, I can argue that the higher the extent of corruption, the larger the informal sector size.

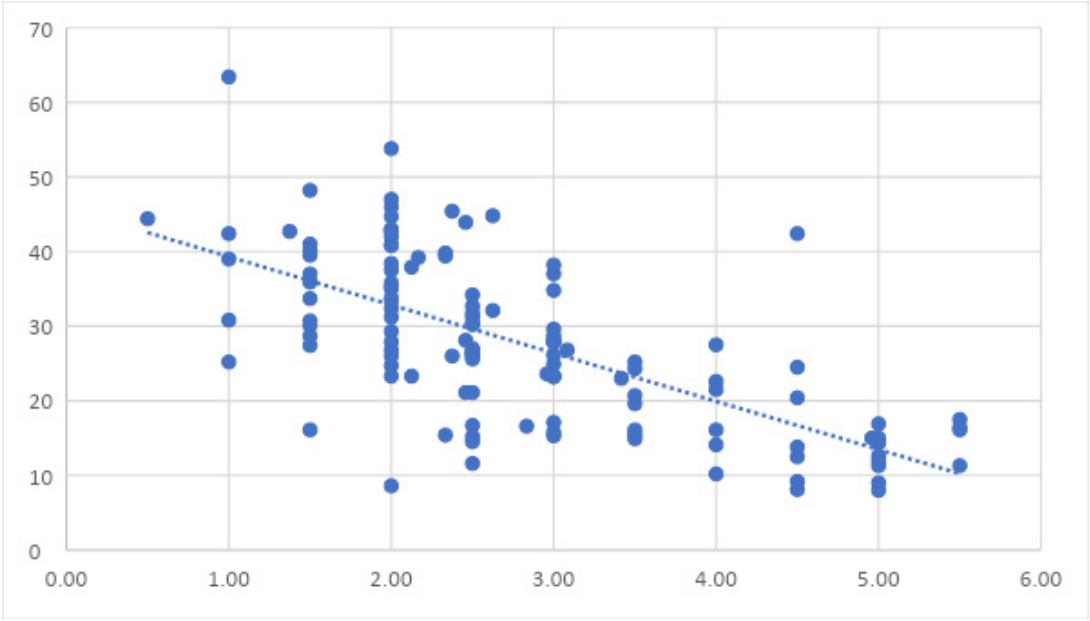

Figure 1. Informal Sector and Corruption Control

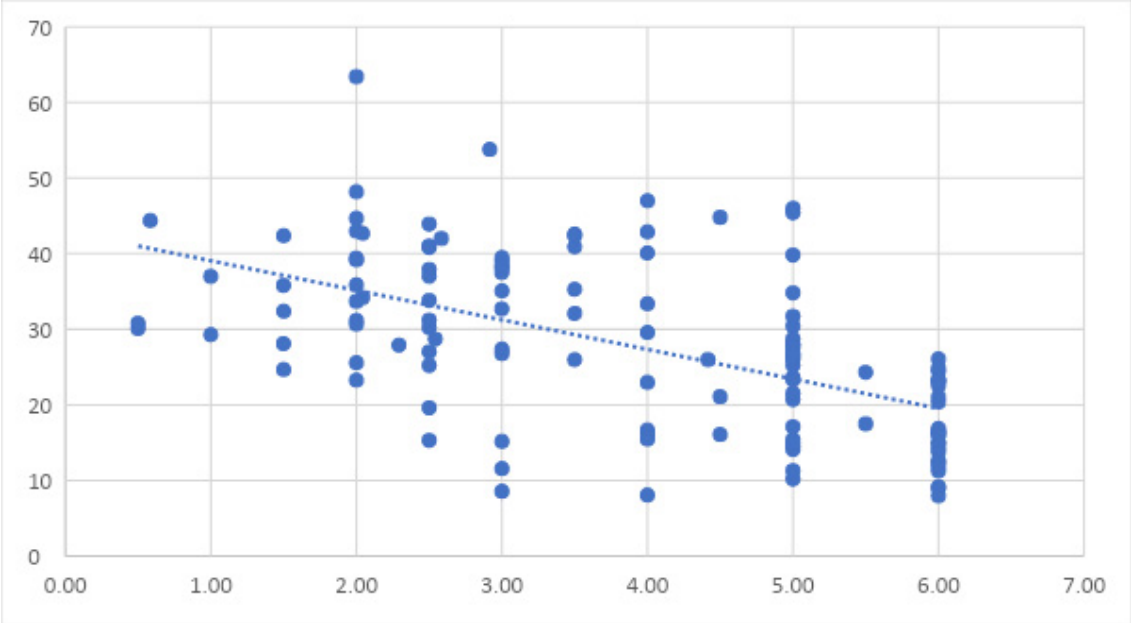

Figure 2. Informal Sector and Military in Politics

Next, Figure 2 presents the correlation between informal sector size (as % GDP) and the military in politics. In this case, the calculated correlation coefficient is -0.55. It clearly shows a negative correlation which indicates that in countries which have more military involvement in politics, informal sector size will increase. In other words, based on these results, I can say that the more interference of the military in politics, the larger the informal sector size.

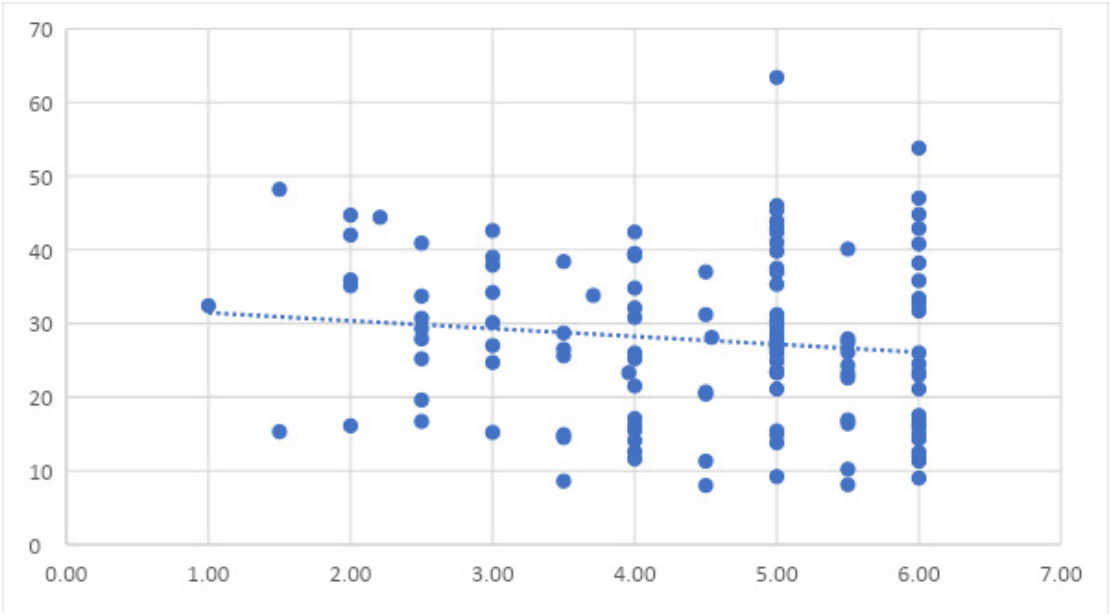

Figure 3. Informal Sector and Religious Tensions

Figure 3 shows the correlation between informal sector size (as % GDP) and religious tensions. The calculated correlation coefficient is -0.12. It shows there is no statistically significant relationship between the informal sector and religious tensions.

Next, Figure 4 illustrates the correlation between informal sector size (as % GDP) and law and order. Here, the calculated correlation coefficient between the two variables is -0.63. It clearly shows a strong negative correlation which indicates that in countries which are better in the enforcement laws, regulations, rules and norms, informal sector size will decrease. In other words, based on these results, I can say that the lower the extent of the law and order, the larger the informal sector size.

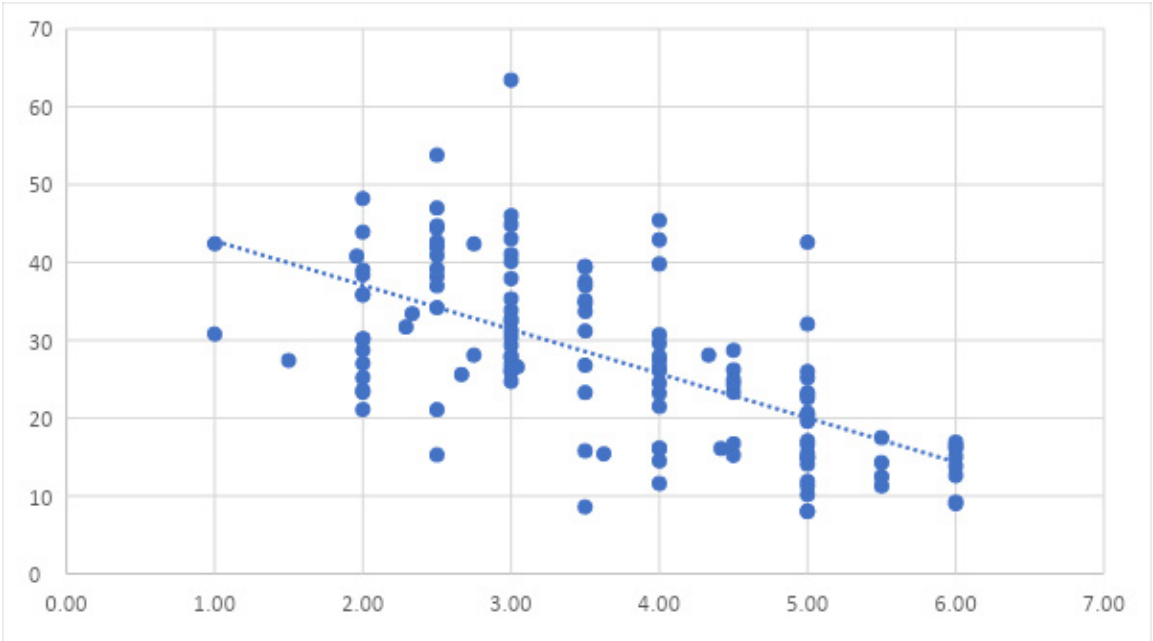

Figure 4. Informal Sector and Law and Order

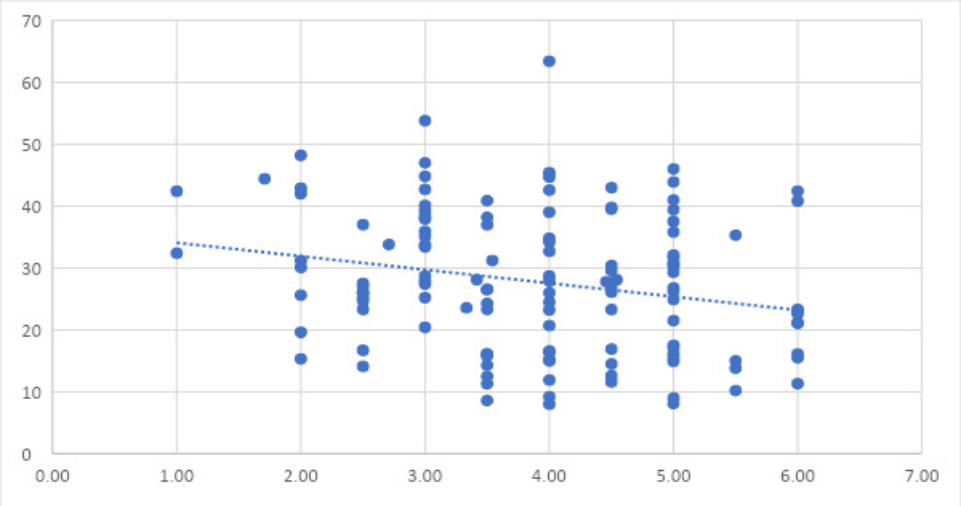

Figure 5. Informal Sector and Ethnic Tensions

Figure 5 illustrates the correlation between informal sector size (as % GDP) and ethnic tensions. The calculated correlation coefficient is -0.23. Similar to the religions tensions, this indicates that there is no statistically significant relationship between the two variables.

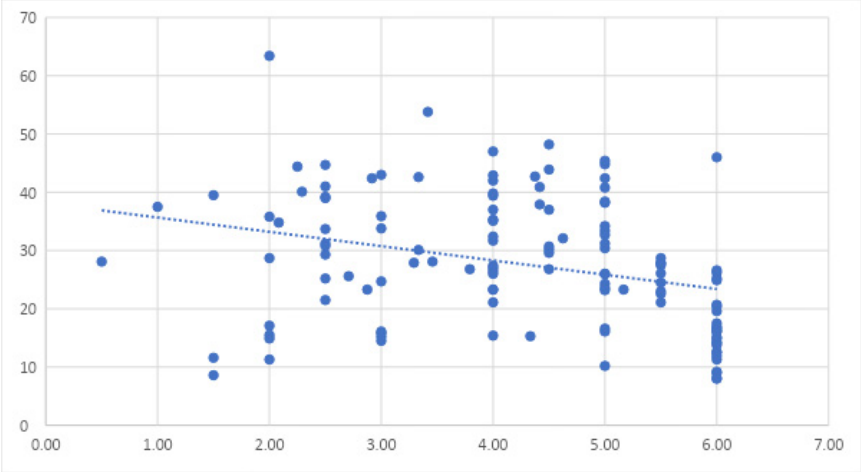

Figure 6. Informal Sector and Democratic Accountability

Next, Figure 6 illustrates the correlation between informal sector size (as % GDP) and democratic accountability. The calculated correlation coefficient is -0.31. Although this is a barely significant correlation, it is much lower than the previous significant ones. So I can then conclude that democratic accountability is somewhat but not strongly related to the informal sector size.

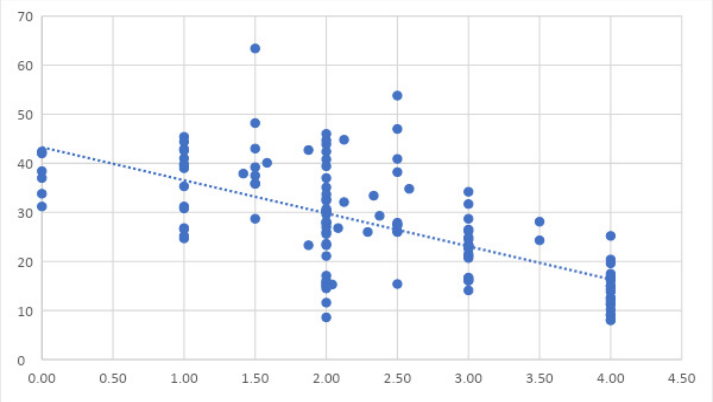

Figure 7. Informal Sector and Bureaucracy Quality

Finally, as a last plot, Figure 7 presents the correlation between informal sector size (as % GDP) and bureaucracy quality. The calculated correlation coefficient is -0.63. It obviously shows a very strong negative correlation which indicates that in countries which have higher bureaucracy quality, informal sector size will decrease. In other words, the results indicated that the less bureaucracy quality, the larger the informal sector size.

4. Conclusion

In this paper I examined how different institutional quality variables are associated with informal sector size. To this end, I used cross-country data. My correlation analysis indicates that among different institutional quality variables, the ones that are significantly associated with informality are corruption control, bureaucracy quality, law and order and military in politics. I believe that these results would be helpful for policymakers in their efforts to design sound economic policy against informality.

These results are based on simple correlation analysis. Therefore, a more full-fledged statistical and economic analysis is very much warranted. Also, even though this study establishes significant correlations between different dimensions of institutional quality and informal sector size, it is silent about the exact economic mechanisms on why there are such relationships. These I leave to future research.

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