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Corruption in Procurement: Evidence from Financial Transactions Data

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This paper develops a novel approach to measuring illicit payments of firms to politicians based on objective financial data from Russia. Firms with public procurement revenue substantially increase tunneling around regional elections, whereas neither the tunneling activity of firms without procurement revenue, nor the legitimate financial activity of firms exhibits a pronounced political cycle. We show that the correlation between tunneling around elections and procurement contacts across firms is an indicator of corruption. We use the variation in the strength of this correlation to build a locality-level measure of corruption. Using this measure, we test and reject the "efficient grease" hypothesis by showing that in more corrupt localities procurement contracts are allocated to less productive firms.

MEASURING CORRUPTION AND ITS IMPACT ON WELFARE

Does corruption improve efficiency by allowing most productive firms to get around inefficient red tape or, on the contrary, corruption gives an advantage to less productive firms with political connections, increasing productive inefficiency? In theory, both answers are possible. **The empirical research on this question, however, is rather limited**. The lack of evidence is not surprising: bribes are unobservable and corruption is very difficult to measure. In this paper we develop a novel approach to measuring illegal payments of firms to politicians and show that when the allocation of procurement contracts depends on whether firms make such illegal payments, less productive firms get procurement contracts.

OUR APPROACH

The goal of our paper is to provide a reliable measure of corruption in public procurement based on objective data and assess the welfare implication of corruption. For this purpose, **we measure the amount of cash tunneled illegally out of firms** around the time of regional elections and **relate it to the probability that these firms obtain procurement contracts** from the government. We find this relationship to be positive and very strong, on average, and show that it is related to corruption rather than the change in political risk associated with elections. Previous estimates of corruption were based on perceptions or covered a much smaller segment of economic activity (see, for instance, work surveyed by Rose-Ackerman, 1999; Svensson, 2005; Olken and Pande, 2012).

The strength of correlation between tunneling around elections and the allocation of procurement contracts across firms varies across localities. We use this variation to measure the extent of corruption in public procurement and test the “efficient grease" hypothesis, namely, that bribery is welfare improving as it allows more efficient firms to bypass the inefficient administrative regulations. We reject this hypothesis by showing that corruption leads to an efficiency loss in the allocation of public procurement.

WHERE DO THE DATAS COME FROM?

The data that made this research possible come from **a list of banking transactions of the near-population of business entities in Russia over a 6-year period available on the Internet**. We identify tunneling, i.e., the amount of transfers to fly-by-night firms set up to take cash out of companies, at each point in time for each legitimate firm. We apply the intuitive criterion that legitimate firms are those that pay taxes, whereas fly-by-night firms are those that have revenue, but do not pay taxes, even though they should be doing so according to Russian legislation. Using difference-in-differences methodology on data of the weekly frequency for all legitimate large firms in Russia, we show that **illicit outflow of cash out of firms that get public procurement contracts exhibits a strong political cycle** (i.e., transfers to fly-by-night firms increase sharply around regional elections in these firms).

In contrast, there is no pronounced political cycle in tunneling out of firms without public procurement revenue. There is also no political cycle in legitimate economic activity, measured as banking transactions between legitimate firms. The increase in illicit cash payments around elections suggests that the money is channeled to politicians as the evidence is inconsistent with the alternative explanation that tunneling around elections is driven by the change in political risk of firms.

A NEW WAY TO MEASURE CORRUPTION IN PUBLIC PROCUREMENT

We postulate that the strength of correlation between tunneling around elections and allocation of procurement contracts across firms can be used to measure corruption in public procurement. As we can calculate this correlation at any level of aggregation, we perform a reality check on this approach at the regional level. As the next step, we move to sub-regional (locality) level of aggregation to study how the efficiency of the allocation of public procurement depends on corruption. Using the variation in our measure of corruption across different localities within a region, we show that in more corrupt environments, public procurement contracts are allocated to less productive firms, controlling for region, industry, and even locality fixed effects.

WHAT DO WE LEARN?

Our approach allows providing systematic empirical evidence based on objective data that corruption has negative welfare implications and is not just an example of ”efficient grease.'' More productive firms lose competition for public procurement contracts when their allocation depends on the illicit payments to politicians. We estimate the amount of cash tunneled to politicians that is associated with corrupt distribution of public procurement to be **around 2.5 million U.S. dollars for an average election in an average Russian region**. Our study is particularly related to the literature showing that political connections in part determine allocation of government procurement contracts.

References

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