The Effect of Democracy on Corruption: Income is Key

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Summary. — This paper provides an explanation for the ambiguous relationship between democracy and corruption. Using rich panel data with annual observations from 1998 to 2012 allows us to control not only for country- and time-invariant factors but also for potential reverse causality between corruption and income levels in a 3SLS framework. Democracy reduces corruption but only in economies that have already crossed a GDP/capita level of approximately US$2,000 (in 2005 US$). For poorer nations, democratization is suggested to increase corruption. Other institutional characteristics are unlikely to drive this result and findings are robust to a variety of robustness checks and quantile regressions.
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1. INTRODUCTION

Despite the substantial literature concerning corruption determinants, a clear consensus related to the role of democracy is yet to emerge. Are democratic countries less prone to corrupt behavior than non-democratic regimes? Understanding the link between regime types and corruption levels is fundamental, especially considering recent political developments around the globe, such as the Arab Spring or the current crisis in Ukraine, which has been traced to increasing corruption levels after transitioning to democratic structures in the post-Soviet era. First, it may help explain why many countries experience *higher* corruption levels after democratization, even though conventional wisdom would predict otherwise. Second, it may help policymakers make well-informed decisions, understanding the potential consequences of democratization.

The following analysis provides an explanation for why some countries, such as Ukraine, may struggle with widespread corruption after turning away from autocratic structures, such as the Soviet Union. Once a nation moves away from autocratic structures (where participation in the public sector is impossible for the average citizen) to a democratic institutional framework, opportunities arise to abuse the newly found political power. Citizens will find a whole new set of options to participate in shaping governments with public offices becoming available to people not directly associated with the previous autocratic regime. In the spirit of Acemoglu, Johnson, and Robinson (2005), de jure political power shifts from a small elite to broad masses, at least partially. Thus, the opportunity to engage in corrupt activities opens up for the majority of people, who previously had no access to the public sector, and consequently, corruption may increase. However, corruption may decrease because we now observe competition over public funds in a democratic institutional setting (see Mohtadi & Roe, 2003, for a theoretical framework). Thus, a priori, it is not clear whether democracy should increase or decrease corruption. So, when would one decide to abuse this newly found political power to engage in corrupt activities?

Our empirical analysis points toward income levels as an essential ingredient: if a country has not yet reached a certain development level (a GDP per capita of approximately US$2,000), democratization is accompanied by increasing corruption. An explanation for this finding, although speculative at this point, may be that in poorer countries the outside option of working in the productive sector is not lucrative enough to prevent the misuse of public funds. In other words, taking advantage of public funds may appear more attractive if the alternative income from working in the productive sector is sufficiently small. However, after a certain development level is reached, democratization actually decreases corrupt activities, as suggested by the traditional literature (e.g., Sandholtz & Koetzle, 2000; Shleifer & Vishny, 1993; and Treisman, 2000). Beyond this point, the richer the country, the more democratization will reduce corruption.

Our analysis incorporates the benchmark control variables of the associated corruption literature, and, in addition, it addresses a variety of notorious problems that have bothered this line of research. First, and most importantly, we show that the link between democracy and corruption remains ambiguous if one does not consider the above-mentioned heterogeneity in income. Second, we incorporate two-way fixed effects, allowing us to control for any country- and time-invariant unobservables. Third, we show that this nonlinearity along the lines of income remains robust to the inclusion of a battery of other potential corruption determinants, particularly other institutional characteristics. Fourth, we address the potential endogeneity problem of income—richer countries may be less corrupt, but less corrupt countries may also be richer—in a simultaneous estimation framework (Three-Stage-Least-Squares, 3SLS). Fifth and finally, we use quantile regression analysis to show that this result does not change across different levels of corruption; it is observed throughout the entire distribution, ranging from the most corrupt nations, such as Afghanistan or Somalia, to the cleanest economies, such as Finland or New Zealand.

The following section provides a brief overview of the related literature, introducing the intuition for our hypothesis. Section 3 summarizes our methodology. Section 4 presents our

data, whereas Sections 5–7(c) show our empirical results. Finally, Section 8 provides a brief discussion of our findings.

2. BACKGROUND

(a) *Previous research on the effect of democracy on corruption*

A general problem in analyzing corruption determinants is that one unifying theoretical framework does not exist. For example, the seminal paper by Shleifer and Vishny (1993) provides an intuition as to how the structure of public institutions determines corruption, but many empirically identified correlates, such as overall income levels or historical aspects, are naturally not captured by their model. This is not surprising given the long and colorful list of corruption determinants that have been suggested at some point by empirical analyses.

The idea that democratization can increase corruption in the short run dates back to Huntington (1968, first version), attributing this phenomenon to underdeveloped institutional frameworks in young democracies. In a more recent study, Andvig (2006) argues "the larger the norm shifts, the larger the prospects for corruption" in general in transition economies. A priori, we could distinguish between two basic consequences from a democratization: (1) increasing corruption, as more people have access to public funds and positions in the public sector and (2) decreasing corruption, introducing competition over the use of public funds and the filling of government positions.

For instance, Mohtadi and Roe (2003) create an endogenous growth model and find that corrupt activities may first increase after democratization but could decrease naturally over time, owing to more competition among rent seekers. In a similar vein, Ehrlich and Lui (1999) and Corchón (2008) find that an autocratic regime may actually produce less corruption than a democratic setting if parliament is dominated by rent seekers. Due to the difficulty of comprehensively modeling corrupt behavior, the associated literature has mostly turned to empirical methodologies. Focusing on characteristics surrounding democracy and its link to corruption, Table 1 provides a basic overview of the most recent empirical studies. Most articles find that democracy reduces corruption, although a curious nonlinearity is noted in at least five of these works.

(b) *Why income levels could matter*

To the best of our knowledge, no paper explicitly highlights income levels as the mitigating factor relating democracy to corruption. [1] In general, the degree of economic development has been shown to affect corruption levels directly (see Treisman, 2000, or Serra, 2006, among many others). Our analysis extends the importance of economic development in explaining the democracy–corruption link. We propose that if basic income levels are not met, newly found political power will be abused for private gains. If countries are sufficiently poor, individuals face limited income opportunities in the productive sector, and political power may simply represent an opportunity to increase one's meager income. However, after a basic degree of economic development is reached, political power does not seem to be corrupted on a systematic basis. In the spirit of Becker (1974), criminal acts are more likely to be committed if alternative options are scarce and not promising substantial income. Higher income levels provide more lucrative opportunities for the individual in the productive sector. If an individual receives political power in a position where basic needs are met the traditional hypothesis about democratization reducing corruption may be accurate. [2]

To formalize this notion, consider an economy normalized to one with a fraction of p private, identical citizens. On the other hand, a fraction of $e = 1 - p$ represents the political elite. Consistent with the concept of a small societal elite, assume $p > e$. In times of autocracy, a private person has no access to political power (and therefore corruption), and her utility consists of

$$U_p = y(1 - t), \tag{1}$$

where y represents her positive wage and t the exogenously fixed tax rate with $0 \leq t \leq 1$. Further assume that the political elite (e) is not constrained, meaning that committing corrupt acts does not impose any cost on them, neither in monetary nor moral terms. This assumption will be relaxed

Table 1. *Literature on the effect of democracy on the absence of corruption*

Author	Conclusion	Data	Measurement of democracy
Iwasaki and Suzuki (2012)	Positive relationship	Panel 1998–2006	Democratization policy index(World Bank)
Billger and Goel (2009)	"Democracy is likely more effective in the conditionally most corrupt nations"	CS[a] observations from 2001 to 2003	Political Rights and Civil Liberties (Freedom House)
Rock (2009)	U relationship	Panel 1982–1997	Democratic years
Serra (2006)	Consecutive democracy has a positive effect on corruption	CS[a] average values 1990–1998.	Political rights index (Freedom House); Dummy for democracy uninterrupted for a 46 year period (1950–1995)
Sung (2004)	Cubic relationship	Panel 1995–2000	Political Rights Index (Freedom House)
Chowdhury (2004)	Positive relationship	CS[a], Panel 1995–2003	Vanhanen's democratization index (PRIO)
Paldam (2002)	"The independent effect of democracy is dubious"	CS[a] 1999	Gastil index (Freedom House).
Sandholtz and Koetzle (2000)	Positive relationship	CS[a] 1996	Political Rights and Civil Liberties (Freedom House). Democratic Years
Treisman (2000)	Consecutive democracy has a positive effect on corruption	CS[a] 1996, 1997, 1998	Political liberties (Freedom House). Democratic years

[a] Pure cross-sectional analysis with one observation per country.