

A Review of the Causes and Effects of Corruption in the Economic Analysis

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Introduction

Only after the 1980s economists have turned their interest to corruption. Although initially confined to the investigations of other social sciences, scholarly research in economics has made important steps ahead in the understanding of this phenomenon.¹ Important surveys on the economic analysis of corruption can be found in Andvig (1991), Rose-Ackerman (1999), Bowles (2000), Andvig et al. (2000), Jain (2001), Tanzi (2002), and Aidt (2003). The following review wants to be an updated version of the previous surveys and a rapid guide to the main achievements in the economics of corruption in the public sector accessible also to non-economists. In particular, the review focuses on the causes and consequences of corruption leaving aside much of the theoretical issues especially revolving around the principal-agent, the rent-seeking, and the institutional approaches. It is divided into two parts: the first part introduces to the main causes of corruption, whereas the second part to the effects of corruption in terms of economic performance. There is still contrasting evidence on some causality nexus and even on the signs of correlation according to both theoretical and empirical investigations, especially about the relationship between corruption and economic growth.² For instance, Treisman (2007) does not find any significant correlation between GDP per capita and the rankings in corruption

¹ As noted by Treisman (2007), the growing attraction of corruption studies by economists can be gauged from a quick search of the article database JSTOR.

² See in particular Aidt (2011) on the problems of causality as well as correlation in the empirical literature.

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indices, whereas Seldadyo (2008) finds a significant negative correlation.³ Unfortunately, correlation does not mean causality, and this thorny issue is explained by Paldam (2002), who identifies a sort of seesaw dynamics in which corruption and economic development feed on each other. Here, however, we want to present a systematic view of the results achieved by all scholars involved in this analysis—which are sometimes conflicting—bearing in mind that there is already a vast quantity of studies performing especially cross-country empirical analyses of the cause-effect issue of corruption, and consequently only the most relevant ones are considered.

Causes of Corruption

According to Jain (2001) corruption requires the existence of three elements: (1) the discretionary power, intended as the power to define rules and policies or to apply them; (2) the expected economic rent associated with discretion; (3) the expected cost of corruption. In particular, the latter element consists of a few components: the psychological cost of committing the offence, the opportunity cost of using time and resources in a legal activity, and the conditional probability of being caught, prosecuted and punished composed with the severity of punishment. The discretionary power and the economic rent act as incentives for corruption, whereas the expected cost as a deterrent. Thus, according to economic theory, these elements mainly explain the presence and the degrees of corruption. In more detail, both empirical and theoretical economic analysis has identified among the observed or predicted causes of corruption the following factors:

High levels of regulation and reduced level of competition The main idea here is that bureaucrats can allocate contracts, permits, licenses, services and tax benefits, and by exploiting their discretionary power and any likely asymmetric information, they can extract part of the rents accruing to the beneficiaries. Ades and Di Tella (1999), Tanzi (2002), Dreher and Schneider (2010), and Goel (2012) find evidence that, on the one hand, greater degrees of legislative and regulative complexity, and on the other hand low competitiveness in the markets bring about more episodes of corruption. However, these issues are typical examples of reverse causality, in which there is a reciprocal impact among variables, in other words, the indiscriminate extension of bureaucracy and the several constraints to competition may also depend on a deliberate strategy pursued by public officials to increase the willingness to pay of government clients (i.e., businesses and citizens) as observed by Macrae (1982), Bliss and Di Tella (1997), and Schleifer and Vishny (1998).

³ About some measurement indexes of corruption see for instance the Corruption Perceptions Index, the Global Corruption Barometer, and the Bribe Payers Index, all from Transparency International. The Control of Corruption Index by the World Bank, and the Corruption Index by the International Country Risk Guide are other indexes used. About the weaknesses of the measurements of corruption see Lambsdorff (2006).

High levels of public spending Goel and Nelson (1998), and Tanzi (2002) argue that a large government involvement in economic activity, especially through investment projects and procurement spending, increases corrupt acts, although much depends on how the public sector works. However, this is a disputed argument. In fact, Elliot (1997) finds the public spending argument in contradiction with the low rates of corruption existing in high public spending countries such as the Netherlands, Canada, and the Scandinavian countries. Moreover, it seems that corruption has increased in countries such as China, Russia or Tanzania which came across extensive liberalizations (Shleifer and Vishny 1993); nevertheless, as noted by Cartier-Bresson (1995), this is not surprising because the liberalization process requires the government intervention, and consequently wide discretion.

Growth of international trade Tanzi (2002) accounts for large bribes that are often paid to get foreign contracts or get privileged access to internal markets, whereas quite the reverse Ades and Di Tella (1996, 1999) and Elliot (1997) find that the openness to trade implies lower levels of corruption. An inverse causal relationship is found in De Jong and Bogmans (2011), who suggest that corruption hampers international trade.

Low salaries of public officials Klitgaard (1988), Besley and McLaren (1993), Mookherjee and Png (1995), Chand and Moene (1999), and Akçay (2002), they all show a negative correlation with a clear causal relationship between the level of salaries of public officials and the extent of corruption. In particular, Van Rijckeghem and Weder (2001), in a sample of 28 countries, find a statistically significant negative influence of low salaries on corruption, but at the same time a considerable reduction in corruption would require important increases in salaries, which can be extremely expensive and thus should be combined with other corruption-fighting measures.

Investments in deterrence The same investments in deterrence can encourage criminals to invest into more sophisticated corruption mechanisms, thereby contributing to an “evolution of species” (Davigo 2003).

Further causes Law press freedom (Brunetti and Weder 2003), endemic corruption itself (Cadot 1987; Andvig and Moene 1990; Murphy et al. 1991; Mauro 2004; Sah 2007), government involvement in promoting industrial policy (Elliot 1997; Ades and Di Tella 1997), widespread poverty (Akçay 2002), unfair recruitment and promotion procedures (Rauch and Evans 2000), and high levels of taxation (Tanzi 2002), they are all further variables impacting on corruption levels.

Effects of Corruption

With regard to the economic effects of corruption, we can distinguish negative effects but surprisingly also positive effects. In fact, Leff (1964), Huntington (1968), and Leys (1970) claim that corruption can theoretically produce benefits to economic systems, especially in the developing world. In auction models, Beck and Maher (1986)

and Lien (1986) show that corruption promotes efficiency since the most efficient firms can afford the highest bribe. In standard models of queuing, Rose-Ackerman (1978) and Lui (1985) show that corruption can be efficiency enhancing because it minimizes the waiting costs for those who put more value to time.⁴ Dreher and Gassebner (2011) find evidence that corruption facilitates firms' entry in highly regulated economies. In sum, by overcoming the slowness of an inefficient bureaucracy, by improving the economic welfare of the middle class, and by speeding the money (i.e., easing financial circuits) corruption would be a "second best" or a "grease the wheels" solution.

In general, all these arguments are based on the consideration that the economic costs of extensive public regulation may be reduced or avoided through corruption. However, poor empirical evidence supports these theories. On the contrary, several empirical studies confute them. For instance, Kaufmann and Wei (2000) examine the relationship between bribes, time spent by management in paperwork and cost of capital, and found that companies paying more bribes are those which lose more time on paperwork as a result of negotiation with public officials and face at the same time a higher cost of capital. As noted by Ades and Di Tella (1997) and Aidt (2009) corruption acts primarily as "sand in the gears". In more detail, the observed and predicted negative consequences of corruption are:

Reduction in investments and economic growth Most empirical evidence agrees in identifying corruption as an important cost-increasing and uncertainty factor, thereby reducing investments and consequently the rate of economic growth (Mauro 1995; Ehrlich and Lui 1999; Wei 2000; Li et al. 2000; Mo 2001; Aidt et al. 2008). In particular, Méon and Sekkat (2005) corroborate this hypothesis by showing that corruption is detrimental to growth and investments especially in countries with an unreliable institutional framework. Bardhan (1997) observes that the channel impacting on economic growth is the reduced incentive of private investments. Murphy et al. (1993) show how corruption would discourage innovation since ruling oligarchies tend to bar entry to innovators in exchange for bribes from established firms. However, Assiotis (2012) finds contrasting evidence by pointing out that no significant causality between corruption and income exists when country-specific fixed effects are taken into account.

Alteration of price mechanisms and distortion of property rights Corruption impinges on free competition and forces out of the market law-abiding companies. Additionally, it distorts the enforcement of contracts and the protection of property rights (Tanzi 2002).

Overregulation and slow down of the bureaucratic process As observed above, bureaucracy tends to be cause and effect at the same time. In fact, bureaucrats are induced to expand regulatory practices and slow down bureaucratic processes in order to persuade government's clients to pay bribes (Myrdal 1968; Rose-Ackerman 1978).

⁴ It must be noted that Kaufmann and Wei (2000) contest the empirical validity of this result.

Alteration of the labor market Corruption brings about the recruitment of unsuitable human resources; this would affect productivity as well as distort investments in education, as found in Mauro (1995, 1997) and in Gupta et al. (2002b). In fact, human capital tends to prefer rent-seeking rather production activities (Baumol 1990; Murphy et al. 1991; Lui 1996; Lambsdorff 1998).

The growth of the informal economy Johnson et al. (1998) and Hessel and Murphy (2000) find a causal relationship between corruption and the size of the underground economy, which eventually drains also tax revenues.

Ineffective and uncontrolled public spending Tanzi and Davoodi (1997) and Mauro (1997) find that politicians tend to divert public resources towards activities more vulnerable to corruption through distortive interventions in public procurements. For example, Tanzi and Davoodi (*ibid.*) find a bias benefiting high-cost and large-scale construction projects rather than high-return value or small-scale decentralized projects.

Misallocation of private financial resources Krueger (1974), Bhagwati (1982), and Murphy et al. (1991) show how profits from corruption are invested in further activities of rent-seeking and not in productive activities. This would explain why countries with higher rates of corruption are those with the lowest rates of private investment (Mauro 1995) or foreign direct investments with respect to GDP (Wei 2000; Habib and Zurawicki 2002; Lambsdorff 2003).

Income redistribution to the affluent population Gupta et al. (2002a) find that high levels of corruption are associated with higher income inequality, showing that corruption causes poverty, unequal distribution, and a reduction in tax progressivity.

Further effects Underreporting of corruption itself (Andvig and Moene 1990; Soares 2004), reduction in international trade (De Jong and Bogmans 2011), and pollution increase (Welsch 2004) also through a negative effect on environment policy making (Pellegrini and Gerlach 2006) have been included among the detrimental consequences of corruption.

Concluding Remarks

The purpose of this paper was to outline the main contributions of the economic analysis of corruption. There are however a few issues to emphasize. First, as noted by Treisman (2000), corruption is hard to study empirically. In particular, many empirical studies have serious difficulty in identifying appropriate indexes of corruption. Treisman (2007) argues that indicators of corruption do not measure corruption *per se* but rather its perception, whereas proxies of corruption utilizing objective data such as the number of public officials convicted for abuse of public office may reflect the anti-corruption effort of the judicial system, and additionally suffer from the underreporting problem due to endemic corruption levels. Second, the causality nexus

is not yet disentangled for variables such as economic growth, regulation, competition, and public spending. Scholars hardly observe simple unidirectional and linear relationships between proxies, and the Paldam's conjecture of a seesaw dynamics seems to fit well to corruption. Third, we should not neglect that beyond the causes and consequences depicted above there are also historical and cultural determinants feeding corruption and influenced by corruption that this review has not surveyed.⁵ Probably, these variables give the indeterminacy we have just accounted of and would represent an important elaboration for future investigations.

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⁵ About this issue, see in particular La Porta et al. (1997).

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