What factors are important to a successful anti-corruption strategy?

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Abstract

This literature review highlights important factors that the theoretic research on corruption has found out, which should be helpful when creating an anti-corruption strategy. This is done by first acknowledging the principal-agent relationship that is between a corrupt official and its principal. While this has been the dominant way to consider corruption in a society, I will present through past research how the principal-agent model while offering important insights for fighting corruption, has also its flaws, which need to be addressed to understand corruption comprehensively.

The factors important to anti-corruption are found by linking the past research with newer one through a central survey on corruption, which addresses possible ways to decrease corruption while also questioning the nature of corruption as simply a two-way relationship between a principal and agent. While this literature review does not offer a specific answer to corruption, it is clear from the review that corruption can not be considered a simple problem, and thus the creation of anti-corruption strategies is not a simple matter that as of yet does not have a universal answer.

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1. Introduction

While corruption has recently gained more attention, it is by no means a new concept in our society and has existed long before economics or any other kind of social science researchers started including it in their research. Arthaśāstra, an ancient Indian treatise written between the 2nd century BCE and 3rd century CE, had an example of corruption occuring in the ancient Indian society. In the treatise there is a mention of public officials succumbing to greed, which lead to them to take a part of the income going to the king to themselves, which is a great example of a principal-agent problem from history (Kangle, 1972). As is evident from this, corruption has always had a negative connotation to it since it is affiliated with greed and selfishness. But while it was considered a hindrance in ancient times, corruption has become an even more noteworthy problem in the recent thirty years with multiple countries adopting anti-corruption policies to combat corruption, and international institutions and organizations like World Bank and UN recognizing corruption as a significant problem for the society (World Bank, 2020; UNODC, 2020). It is no surprise then that a lot of scholars across different fields have grown interested in understanding corruption and how to combat it.

The push for a more corrupt-free world was partly due to the research on corruption showing the negative effects of corruption, especially the way it could potentially deteriorate the whole national economy of a country. With the increased data on corruption through for example corruption indices and questionnaires, economists have found alarming consequences of corruption. One of these is the relationship between the CPI, a corruption perception index by Transparency International, a non-governmental organization from Germany that specializes in the research of corruption, and HDI, the Human Development index by UN, which considers the gross national income per capita, health and education. This correlation is backed by multiple studies (Johnston, 2005; Akçay, 2006; Reiter & Steensma, 2010; Askari, Rehman, & Arfaa, 2012), so it is no wonder that UN decided to pay more attention to corruption. On top of this there are multiple papers showing the negative effect corruption has on the national economy through reduced foreign direct investment (Wei, 2000; Habib & Zurawicki, 2002; Egger & Winner, 2006), lower exports (Lee & Weng, 2013; Musila & Sigue, 2010) and diminished economic growth (Mauro, 1995; Aidt, 2009). The country leaders thus have a good reason to pursue the suppression of corruption to improve their countries' economic situation.

This line of thinking to this day though is not unanimous, and some authors have insisted on the positive effects corruption might have. This point of view on corruption can be traced back to 1964, when Leff argued that corruption could foster development in developing countries especially by getting rid of the harmful red tape entrepreneurs have to face when doing business with the public sector. This has later been named as the "grease the wheels" theory, which in a broader sense describes any positive effects

corruption might have in economic development. While it has not gained the acceptance of the majority, as none of the major international institutions have accepted it, there have been some amount of economic papers supporting grease the wheels theory, such as a theoretical approach by Lui (1985) to explain how bribes can make bureaucratic processes more efficient by reducing the amount of time spent in queues. Empirical papers have also found surprising results sometimes, and Egger & Winner before their 2006 paper found corruption to in fact increase FDI (Egger & Winner, 2005). Some researches have suggested that depending on the institutions of a country corruption might raise efficiency and thus result in economic growth (Mironov, 2005; Méon & Weill, 2010). For example, In the paper by Méon & Weill, when the institutional quality of a country is poor, corruption can have either no significant relation or a positive relation with economic growth. Despite these the amount of empirical research showing corruption to be detrimental is overwhelming compared to the research supporting the grease the wheels view, which explains its unpopularity. Corruption has been described also as "never more than a second-best solution", since by it being illegal, there will be some transaction costs to evade getting caught (Rose-Ackerman, 1978; Shleifer, 1993; Aidt, 2003).

To combat corruption, one first must understand why corruption exists and what the underlying conditions for corrupt behavior are. While it could be possible that as stated in the ancient treatise Arthaśāstra corruption stems from greed ultimately, the problem itself seems to be much more complex. In certain countries corruption might be a necessity to a business and getting a license might not even be possible if bribes are not used (Shleifer & Vishny, 1993]. Corruption thus can become a way to provide solutions in a defective society (Marquette & Peiffer, 2017), so blaming corruption on the greed of the briber is a crude way to perceive corruption.

Fixing such defective society will bring about costs. Thus, the people making anti-corruption strategies must to some extent know whether the benefits are higher than the costs. While I will not delve deeper into the negative economic consequences of corruption, as they are not the focus of this literature review, this might explain to some extent why corruption is perceived even in some of the least corrupt countries like the Nordic countries, at least according to the Transparency International's CPI. Later in this thesis, I will also introduce by an illustration, which will highlight why some level of corruption is acceptable.

There have been different ways researches have tried to model corruption to better understand ways to prevent it, and since this problem isn't limited to only a single academic field, contributions have been made by different branches of social science, but most notably for this paper by Economics, Political science, Management, Law, and Sociology. What all these academic fields share in common in the research of corruption, is that a certain theory has been used to understand corruption in all of

them. This theory is known as agency theory and especially in the research of corruption it can be used to model the situation, where someone acts for, or in the place of another, given he has been given authority to do so. This sounds awfully familiar to a corruption situation, which is why it was one of the first ways to try to understand corruption. While the agency theory does seem like an adequate framework to try to solve the problem of corruption, it might not offer the answer for an optimal solution despite the amount of research that has honed it to its current state. It is important to understand the implications it has though, which is why this paper will use it as a base to model the ways to prevent corruption. But I will also illustrate the problems the theory has and how by understanding the problems, anti-corruption literature can benefit from the studies even if they do not represent the situations realistically.

This thesis will through a literature review raise important factors that should be considered in the implementation of anti-corruption strategies. The basis of the analyzation is Aidt's paper, which surveys the economics of corruption, and offers insights on the nature of corruption. Before this, agency theory, or more specifically the principal-agent relationship, will be introduced. After presenting Aidt's findings, a new view on corruption will be introduced, which can be seen to be linked with his paper.

1.1 Defining corruption and the different groups in the principal-agency problem

The definition of corruption has not always been the same across different research papers, and while it was more precise before, corruption's definition now has become broader to fit the different situations better. Transparency International updates a corruption ranking used in many of the modern corruption researches, and thus their broad definition of corruption seems to be the most accepted version at this time. "The abuse of entrusted power for private gain" summarizes well the nature of corruption, since even though corruption might get associated only with public officials and leaders abusing their power, it is not unprecedented to find corruption in the private sector, for example inside a big corporation there might be high ranking executives favoring their relatives in recruitment. In theoretic research the definition might be a little more specific, and especially in the examples and models in this paper, the private sector will be left uncovered, so corruption will mostly be a public sector problem to simplify the reviewing of the literature.
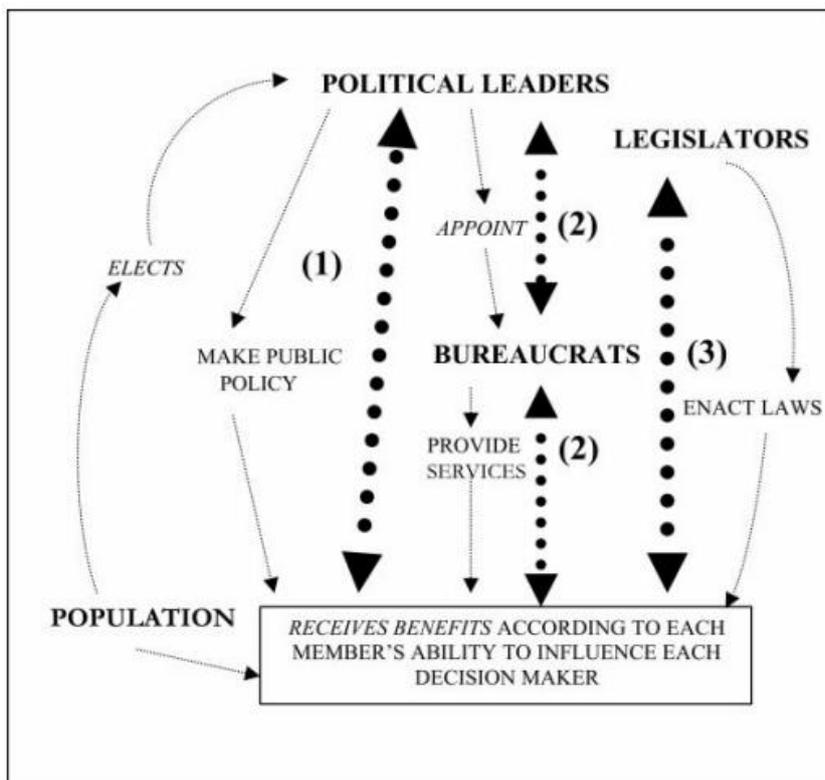
Figure 1: Relations between the citizens and decision-makers (Jain 2001)

The image above illustrates the possible relations the citizens, public officials, leaders, and lawmakers might have, and it shows the places where corruption can be found. This image should be kept in mind in the future chapters related more closely to the principal-agent problem, since this also shows the possible locations where agency theory is relevant. While it does not really fit the research covered in this paper, a viable addition to this image could be the relations inside a corporation, where for example the relations of stock holders, board of directors, and the CEO can suffer from principal-agency problems. In the next chapter I will discuss more about these relations to give better understanding who are usually the principals and who the agents.

The numbers in the image are related to the different types of corruption according to Jain. The relation numbered by one demonstrates the so called "Grand corruption" in the corruption literature and as the name implies, it is the corruption happening on larger scale. In other words, in this type of corruption the decision-makers on the top of the government hierarchy, the agents, are exploiting the citizens, the principal, for their own good. This type of corruption is for example what has happened recently in Latin America with the Odebrecht-case (Gallas, 2019), where multiple Latin American political leaders including presidents were convicted of bribery. These types of bribes can possibly affect whole countries, since the corrupt leaders might choose a policy benefiting the briber because of the bribe. In Brazil, the construction projects for the football stadiums for the 2014 FIFA World Cup were affected by corruption, when the Odebrecht company bribed their way to gain rights for the construction projects.

This corruption type thus can have a big effect on the national economy, since large sums of money are in question.

The relation corresponding to number two in the picture is a smaller scale corruption called "bureaucratic corruption" by Jain. In this type of corruption the lower ranking public officials are always a participant, but unlike in grand corruption, this type of corruption can be between public officials and the political leaders acting as their superiors, as well as between public officials and the citizens. Bureaucratic corruption is more visible in everyday life especially in corruption-ridden countries, where citizens might bribe a police officer to evade a fine or bribe a public official to speed up the process of getting a passport. This type of small-scale corruption has been called in the corruption literature "petty corruption" in contrast to grand corruption. Even though a single incident with this type of corruption might not have as big of an impact as grand corruption, it can still have an impact on the national economy since it is more common, and especially since every instance changes the perception the citizens have on corruption (Persson et al., 2013).

The last type in the image indicated by number three called "legislative corruption", is the type of corruption that has not been that relevant to the economists researching corruption, possibly because it is not as easy model as the other two shown in the image. It is nevertheless very relevant to the anti-corruption strategies, which I will discuss later, since the legislators can have a big impact on the corruption climate in a country. If the legislature is corrupt in a country, getting rid of corruption will become increasingly difficult, and thus the corrupt agents will have an even bigger reason to stay corrupt.

2. The agency problem of corruption

The agency theory's roots can be traced hundreds of years back to the book that is considered to have started classical economics, The Wealth of Nations, the magnus opus of Adam Smith (1776). In his book he acknowledges the problem organizations face, when a manager(agent) is handed control over an owner's(principal) property. He points out that the managers cannot be expected to take care of said property "with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own" and thus the managers can act in a way the owners would consider negligent or profuse. Even though the problem was acknowledged so early, it took until the 1970s for economists to refind this problem and start to create models to understand the consequences these problems related to the agent might have (Kiser, 1999]. Next, I will explain the agency problem, also known as principal-agent problem, which is the core of agency theory and the framework many researchers used to examine corruption.

Ross (1973) in his research was first to make an economic model of the agency problem, which he called "The Principal's problem". This problem arose when the principal and agent both strived to maximize their utility function while asymmetric information was present. In this situation the agent has more information and thus the principal must give incentives to him to maximize his own utility. He showed this through a mathematical model, thanks to which the economic foundation for agency theory has a comprehensive mathematical basis, as multiple other economists created mathematical models to contribute to this theory. While he argues that the examples of agency are universal, and thus could be applied to the research of organizations other than firms, the problem was used in economics as a framework to study firms at the beginning, probably somewhat due to another important paper succeeding it.

Ross's paper inspired two economists to research the agency problem further, and thus probably the most influential agency theory related paper (over 90000 citations at the time of writing) was published by M.C Jensen and W.H Meckling in 1976. This paper introduced a solution to the problem presented by the agency theory, a problem Jensen and Meckling described as a problem of ownership, which lead to logical conclusion to tackle this problem. They used a firm as the organization to show this problem, similar to how Smith also chose a firm to best show the problem. Since the managers (agents) did not have any ownership over the firm, their solution to the problem was to give some of this ownership to the managers, which works both as an incentive and a deterrent, since now the manager had to share the risk of the principals and he could gain more utility by doing his work well.

This solution of ownership sharing, which could also be understood as a form of outcome-based incentive, is easy to replicate into joint-stock companies, where the CEO could for example have a part of his salary come as shares of the company (Jensen & Meckling 1976). Sadly, this solution is not as easy to replicate into government bureaucracies, where it is hard to give a public official a "share of the government (or the country perhaps)", since while one could consider the government to be an organization like a company, the "owners" are in a way supposed to be the citizens. So, having the public officials gain more government owned property for example would not probably work. Although it can be argued that every public officials' job has already part of their utility function shared with the country's, since they are a part of the country's "owners". They should then always have some incentive to do their job as well as possible, since doing their job badly would hurt the country, and thus their welfare too. Obviously, the situation is not this easy, and the gained utility from corruption, in short-term especially, for example would feel bigger to them than the lost utility of the "country doing worse", which for them would also be hard to perceive compared to a payment they can instantly perceive on their bank account.

Researches have brought up other solution methods for the principal-agent problem, albeit sadly these solutions are mostly meant to be applicable to firms. Panda and Leepsa (2013) in their literature review of the agency theory list these remedies, and besides the managerial ownership discussed before, other ways to reduce the problem in a firm are increased debt level, blockholders (basically a more concentrated ownership in a firm), dividends, board of directors (including more outside and independent directors) and "market for corporate control" (efficient firm acquiring a poor performing firm). Two of the remedies listed by Panda and Leepsa could be applied to anti-corruption though, first of them being executive compensation. While this is a vague solution, it is still one that could easily be used to deter corruption. Core, Holthause, & Larcker (1999) theorize that by constantly revising the agents compensation and by creating an adequate incentive package, the agent would work harder for the firm (or in our case, a governmental organization), which would also increase the wealth the principals would gain. Perhaps because it is the vaguest, it is the most applicable. Another interesting solution method that sadly does not get discussed in the anti-corruption literature, is "the labor market" remedy, which expects the agents to pursue better opportunities from the labor market. According to this remedy, the agent needs to prove themselves with every job, since their value in the labor market is based on his previous jobs. By creating more opportunities in the labor market of a public bureaucracy, more competition could be created, which would lead to the agents to strive for better performance and possibly lower corruption, if succeeding in the labor market would require the agent to be non-corrupted. Thus, an already corrupted labor market would completely repeal any positive effects a competitive labor market could have on corruption.

While the two influential economic papers might not offer the solution to the agency problem happening with corruption, and the applications of firm focused agency theory might not work so well inside a public bureaucracy, the principles do introduce an interesting way to analyze the problem and a way to conceptualize corruption to be a problem of incentives, deterrents and monitoring, where an agent decides based on these whether to participate or not in corrupt acts. To apply the principles to the research of corruption, the models created for corruption illustration have used more the basic models made by other famous economists. These models are as old as the classical principal-agent models, and while they are not specifically labeled to be a part of the agency theory literature but rather crime literature, they do have similarities and complement each other especially in situations with corruption being the main focus.

A principal-agent problem in a firm is not necessarily illegal, since while the CEO's and other managers job is to maximize the utility of the stockholders, doing a "bad job" might just result from them being incompetent managers. But since corruption is illegal, crime literature can be used more effectively to design incentive programs to the corrupt agents. Classic papers by Becker (1968) and Becker & Stigler (1974) offered a starting point to the research of corruption from the perspective of a principal-agent relationship, where the agent was the one giving into corruption and thus committing crime. While I will not elaborate on their models, since the example in the next chapter has a simpler method to illustrate their findings, these papers serve as the foundation to deterring crime by: modeling wage incentives in the form of a efficiency wage to raise the opportunity cost of corruption, increasing punishments to raise the costs of committing corruption, and to raise the probability of getting caught to raise the proportion of the costs of corruption (punishments and loss of job) compared to the benefits in a decision-making situation involving corruption.

The books by Rose-Ackerman (1978) and Klitgaard (1988) have extensively used the principal-agent model to analyze corruption and have worked to popularize this point of view in the research of corruption. Both books also offer insights that can be used in anti-corruption strategies, Rose-Ackerman especially defining areas where anti-corruption can be the most beneficial, and Klitgaard offering multiple means to combat corruption (Groenendijk, 1997). While these have been important works to the topic, I chose a survey on corruption made by Aidt (2003) as an exemplary paper to highlight the important factors that should be considered when creating an anti-corruption strategy. This paper not only is relatively easy to understand, will also nicely link the past theory with principal-agent relationship being given to a newer theory that has gained recent popularity. The next two chapters will present the finding from that paper that are relevant to anti-corruption strategies.

3. Example of an agency relationship with corruption by Aidt and possible corruption controls

In this chapter I will present the model for corruption by Aidt (2003) to show a possible way to take the principles of agency theory and Becker's & Stigler's papers into the research of corruption. This model is supposed to be specific, which is why the example is about corruption happening in tax collection. While the example is a specific case, it is a good way to introduce the problems that arise with corruption control, and more importantly, to show how the agency theory can be flawed in practice, at least when the research is about corruption. The example does introduce a few factors decisionmakers should consider when constructing an anti-corruption strategy.

3.1 Tax collection example by Aidt (2003)

This relatively simple example models the agency relationship between a tax collector and government, where the tax collector is the agent and the government are the principal. This is a perfect example of bureaucratic corruption, which could also be petty corruption, if the scale was smaller, for example if the tax is collected from an individual for a small transaction he did like selling stocks for profit. An important addition to the corruption situations in this case though is the firms, which while are not explicitly stated to be part of the problem, still affect the problem. The firm being the briber thus has decision power on the bribe amount, and Aidt first defines how much this bribe is. The function for the bribe in his model is

$$b = \max[k(\pi - pg), 0] \tag{1}$$

where k is the amount of the bribe recovered by the tax collector, π is the amount of profit the firm makes, p is the probability of the government finding out corruption (in this case the bribe), and g is the penalty paid by the firm if it is caught bribing.

The variable k is introduced as a transaction cost, since bribing requires secrecy, which will result in additional costs, for example hiding the evidence of bribing or even bribing other people with the knowledge of the original bribing. All of this will make the final amount of the bribe to be less than it might be perceived. As it is possible to see from the function, a negative profit or a zero profit will result in a no-bribe situation, since in this problem of tax collection, the firm only needs to pay taxes (and then bribes), if they make profit. In this example the tax rate is assumed to be 100%, which is why the bribe is not affected by the tax rate. Then Aidt constructs a function to present the situation when the

tax collector decides to take a bribe. The function for this is $(1-p)*(w+b)+p(w_0-f)>w$, where w is the tax collector's wage in the public sector, w_0 is the tax collector's wage he could get in the private sector, and f is the fine paid by the tax collector if he is caught. According to this function, not getting caught will mean the tax collector gains both the public sector's wage and the bribe amount, and if he is caught, he will still be able to work in the private sector, but will also have to pay the fine. This function can be simplified into

$$(1-p)*b+p(w_0-w-f)>0 \tag{2}$$

which shows the important factors that affect the tax collector's decision making. Aidt lists these controlling elements into three groups: "the wage rate (w), the monitoring system (p), and the legal remedies (g, f)". It is easy to see how these three elements are connected to the agency theory, where the wage rate corresponds to the incentive, the monitoring system to the monitoring, and the legal remedies to the deterrents. Thus, it can be argued that corruption can be reduced by changing the wage rate, developing the monitoring system, or increasing the punishments. This model has similarities to the Becker & Stigler (1974) and Becker (1968) models, which also conclude that wages, monitoring, and fines are an important factor when controlling crime, which could be for example be bribery. Next, I will take a deeper look into these three categories of corruption control.

3.2 Wage rate and the pay incentives to public officials

Aidt (2003) introduces the concept of efficiency wages, to serve as a way to decide a proper wage rate. This type of efficiency wage was proposed by Becker and Stigler (1974) in the aforementioned paper, which was about law enforcement and more relevantly to this section, about the ways the "enforcers" (agents) could be incentivized to not engage in malfeasance, which in his example could have been for example bribery. In his paper he states that "the fundamental answer is to raise the salaries of enforcers above what they could get elsewhere", in Aidt's tax collector case it would simply be raising w to be higher than w_0 by some amount. This in essence is an efficiency wage, and it is simple to formulate it from the simplified function in the last chapter. The efficiency wage in Aidt's example is

$$w^e = w_0 + \frac{(1-p)}{p}b \tag{3}$$

Now it is possible to see the mark up needed for the private sector's wage if the government would like to model a more efficient wage rate. With a more efficient monitoring system, this mark-up would be small, as it can be seen from the function that big p value would imply a lower ratio the bribe is multiplied by. While in this example this would be the optimal wage rate, raising wage rates might not work the way it is expected in this example.

Both Hong Kong's and Singapore's anti-corruption reforms used efficiency wages as a corruption control successfully, where public salaries where raised higher than the private sector salaries (Bardhan, 1997). Cross-national regression analysis has been made to test the possible relation between higher salaries and lower corruption and the results seem to indicate towards statistically significant relationship (Panizza et al., 2001; Van Rijckeghem & Weder, 2001). This relationship was questioned by Treisman (2007), as he argued about the robustness of the results. Treisman found no statistically significant relationship between public official's wages and corruption, so it can be argued that there is no sufficient evidence on the incentive wages at least from a cross-national perspective (Gans-Morse et al., 2018).

A study by Foltz and Opoku-Agyemang (2015) examined the impact of wage reforms on Ghanaian police officers when compared to the police officers in Burkina Faso, where wages stayed low. This is an example of petty corruption where the Ghanaian and Burkinabe police officers could be bribed at checkpoints. The Ghana Government doubled the police officer's wage in an attempt to reduce corruption, but unfortunately while the number of bribes decreased due to the wage reform, the average size of the bribe increased, and because of this the total amount of bribe increased. Raising wages can thus have some other consequences even though it might lower the amount bribery acts. In petty corruption situations the effects might differ from grand corruption examples significantly, although unfortunately there does not seem to be any research done on the wage reforms targeted towards high level bureaucrats or political leaders. Gans-Morse et al. (2018) summarize in their review on anti-corruption methods, that while the wages contribute to the reduction of corruption, they are usually insufficient on their own, but since results from different study methods (quantitative study on macro and micro level as well as qualitative study) are differing, no conclusive answer can be given.

3.3 Monitoring and the probability of getting caught

It is easy to see from simplified function, how by raising the probability of getting caught (p) the tax collector has a stronger incentive to not engage in corruption, since a high value of p will result in a smaller effect on the bribe and larger effect on the possibly negative part of the function ($w_0 - w - f$). The probability of getting caught can be increased by creating a more developed monitoring system, which can prove to be costly. Laffont and Guessan (1999) point out that if the people in charge of monitoring the system are corrupted, an increase in monitoring (a larger budget for monitoring for example) might increase corruption. The monitoring system is also significantly more complex system than for example raising public wages, and thus just pumping money into monitoring might not simply lower corruption.

There have been many ways corruption researchers have approached this control type, but one of the simplest ways of increasing monitoring would be top-down monitoring or an extreme case of this, a crackdown against corruption. Di Tella and Schargrodsky (2003) were able to take advantage of a unique event that happened in the capital of Argentina, Buenos Aires, in their study. In 1996 a new government with a goal to reduce corruption was elected for Argentina, which resulted in closer monitoring, in this case especially on input prices public hospitals had to pay to get needed supplies, which offered a new way analyze the effects of a crackdown and public officials' wages on the input prices. These procurement prices served to measure corruption, as Di Tella and Schargrodsky attributed the price variation to the corruption-related expenses, where lower prices meant some of those expenses had to have been eliminated. For the first nine months after the new government they found a 15 percent decrease on the prices the medical supplies, after which reduced to 10 percent decrease. If the indirect effect on corruption can be trusted then, it can be argued that monitoring can decrease corruption.

Another way to increase the probability of getting caught would be transparency, which in this case can be defined as the easiness to gain information about corrupt cases. One of the most researched factors supposed to influence corruption related to transparency are the studies made on the relationship between freedom of press and corruption. On a macro level, Bhattacharyya and Hodler, (2015), Brunetti & Weder (2003), Camaj (2012) as well as Treisman (2007) have done cross-national regression studies on this relationship and found high freedom of press reducing corruption levels, at least the perceived levels. The studies related to freedom of press seem to have rather unanimous results on the relationship, so there is no reason to exclude freedom of press when creating an anti-corruption strategy. There are also specific studies about the effect of certain transparency laws such as financial disclosure laws and freedom of information laws. For example, Vargas and Schlutz (2016) found the implementation of financial disclosure laws to reduce corruption, though only "perceived" corruption. On the other hand, implementation of freedom of information laws had an opposite effect on the perceived corruption (Costa, 2013). Gans-Morse et al. (2018) argue this to be the case, because freedom of information laws expose more corruption to the people that answer the questionnaires that make up the corruption perception indexes, and thus raise the levels of perceived corruption.

A modern view to transparency and monitoring is the usage of internet and e-governments. If corrupt transactions can only be done online, it should be easier to notice corrupt behavior as data of the transactions can be used to keep a track of corrupt practices in the system. Thus, it serves as an efficient method to monitor agents. These claims have been backed up by empirical research, and for example Andersen (2009) and Elbahnasawy (2014) find evidence from international data, that the introduction of e-government has reduced the amount of perceived corruption.

3.4 Punishments

The effect of increasing the punishments (g, f) in Aidt's example is also relatively simple to see, as a larger fine for the tax collector (f) will increase the deducting portion of the function, the same one that is affected by p. Increasing g will lower the bribe amount as the firm is less encouraged to bribe. Increasing punishments as a way to reduce illicit behavior can also be seen in paper by Becker (1968) and Becker and Stigler (1974). In terms of costs, raising punishments seems like a great way to decrease corruption, since the government will not need to pay higher wages or higher monitoring costs. This could be the reason why some countries, such as China, have adopted radical anti-corruption methods by increasing this punishment by imposing death penalties to public officials (especially high-ranking ones) (Lu & Zhang, 2005).

Even if the effect of punishments as cost inducing factor in an individual's decision-making has been known for a long time, there does not seems to be sufficient empirical research on the subject (Gan-Morse, 2018). Some experimental research seems to indicate towards a lower bribing incentive when punishments are high (Abbink et al., 2002). Hasty (2005) also in her paper notices that in Ghana, higher punishments were less effective than alternative methods, when official was caught for corruption. Also, without sufficient monitoring high sanctions will be useless, as the punishment relies on the corrupt official getting caught, or in Aidt's example the variable p.

4. Other notable findings on corruption's nature

In this chapter I will present the other findings Aidt made in his corruption review that are not specifically corruption control methods. They are still important factors to consider when creating an anti-corruption strategy, as they illustrate the different features corruption has, and how an incentive-based method might not be optimal solution. This chapter will address how it might not be optimal to expunge corruption in some cases, as it is costly to do so. Aidt's paper has also a simple model about the self-reinforcing nature of corruption, which I will go over. Lastly, his paper's main argument will be introduced, which will lead this literature review to the newest addition of anti-corruption literature in the next chapter.

4.1 Social welfare with and without corruption

To prevent corruption there must be some costs, since changing the controls is not free. To better illustrate this Aidt creates a utilitarian approach to model social welfare. Since the principal is assumed to be benevolent in the tax collection example, he assumes that the exogenous factors (w, p, f and g) are designed optimally. The model will use explicit incentives, and to highlight its welfare effects, certain assumptions will be made ($p = f = g = 0$ and reservation wage [$w_0 = 0$]). The social welfare can be formulated as:

$$u_p = t(\cdot) - w(\cdot) + \alpha\big(u_f + u_t\big) \tag{4}$$

where $t(\cdot) - w(\cdot)$ indicate the tax revenues consisting of tax policy subtracted by the incentive wage, u_t is the tax collector's welfare consisting of the incentive wage $w(\cdot)$ and bribe b, u_f is the welfare of the firm that can either be $\pi - t$ if profits are made or $-at$ if there are no profits, and $\alpha \in (0,1)$ which shows the weight assigned to the welfares of the firm and the tax collector. Aidt explains the reason for the parameter a is to show taxes are more costly, when there are no profits, and thus discourages the government to tax in such situation, and if the parameter's value is big enough, tax collector's information about the profits is needed.

The tax collector has probability ε to notice a firm earning profits, the firm has probability h to gain profits, and the probability of the tax collector being corrupt is $1 - \gamma$. Obviously, when a firm makes no profits the tax collector will tell so to the principal (government). But in the other case tax collector can either report a firm earning profits or not, in which case tax collector could be lying to gain a bribe according to function (1) (with the assumptions taken into account, $b = k\pi$). To show some amount of corruption might be optimal, a benchmark for expected social welfare is formulated as $\bar{u}_p = h(\alpha\pi +$

$(1 - \alpha)\varepsilon\pi$, in which case the government itself can notice with probability ε, if there are profits, and can choose to not tax, if there are no profits. Since there is a principal-agent relationship between the government and the tax collector, a probability of corruption $1 - \gamma$ will need to be addressed and an incentive is made.

Aidt introduces two situations, one where there is no corruption and one where there is corruption. In the situation with no corruption, corruption is solved by giving an incentive wage the size of the bribe whenever high profits is reported. This leads to an expected social welfare of

$$u_p^{NC} = \bar{u}_p - \varepsilon h(1 - \alpha)k\pi \tag{5}$$

which is less than the benchmark amount, since the incentive wage while eliminating corruption, raises the costs government must pay ($k\pi$) with a probability of εh. Instead, in a situation with corruption no incentive wage is paid, and the expected social welfare is

$$u_p^{C} = \bar{u}_p - (1 - \gamma)\varepsilon h(1 - \alpha k)\pi \tag{6}$$

and it is also less than the benchmark value since the acceptance of bribes lowers social welfare by $(1 - \alpha k)\pi$ as some taxes are not collected. Only the corrupt tax collectors are considered in the probability in this situation.

From figure 2 it is possible to see how expected social welfare changes in relation to the transaction costs, where low transaction costs ($k > \frac{(1-\gamma)}{1-\alpha\gamma}$) imply that allowing corruption more preferable than offering high incentive wages. It is simple to understand the reasoning behind this, as high transaction costs lower received bribe amount, and thus the tax collector has less of an incentive to accept them. This example shows how some amount of corruption might be acceptable if a country wants to maximize its welfare, and thus the optimal anti-corruption strategy might need to allow corruption to persist in some places, for example in tax collection as this example shows.
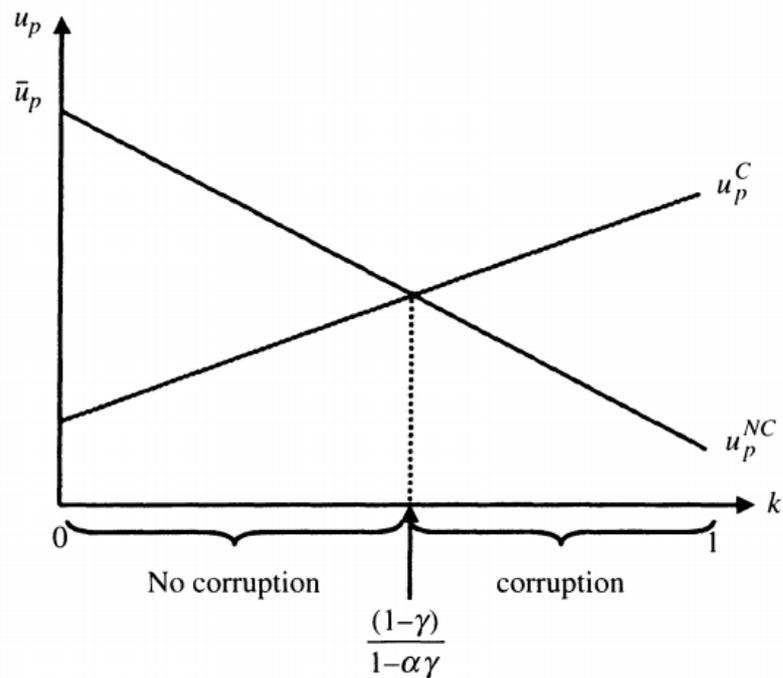
Figure 2: Expected social welfare in relation to Transaction Cost (Aidt 2003)

4.2 The effect of history in corruption

The last model I will introduce from Aidt's paper is his "self-reinforcing corruption" model, which takes a different approach to the tax collector example that was used in the other models as well. This model introduces the idea of history into tax collection and is not thus as individualistic as the typical principal-agent relationship. He lists three reasons why the state of the organization or society can affect an individual's decision-making based on past papers:

(1) "It is harder to audit corrupt officials in societies where corruption is more prevalent."

(2) "Corrupt individuals want to interact with other corrupt individuals and continue to be corrupt if they have interacted with a sufficient number of corrupt individuals in the past."

(3) "The reward to rent-seeking relative to entrepreneurship is high in societies where most individuals seek rents and accept bribes."

The model used to link past corruption to the present and future corruption is fairly simple, and the only new component to the tax collector example is a cumulative density function ($F[\cdot]$) of corrupt officials' cost of not reporting the honestly, or as Aidt calls them "the internalized moral costs" (c). These corrupt officials are in this example both the tax collectors and auditors, since a tax collector can evade dismissal by giving the bribe he got from the firm to the auditor, as he is caught. Implicitly,

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by comparing the expected gain of bribe-taking and not taking a bribe, the proportion of corrupt individuals is

$$1 - \gamma = F[(1-p)b - p\gamma w] \qquad (7)$$

with the assumption that $f, g,$ and w_0 are zero. The function shows how when the probability of getting caught (p) is small, the number of corrupt officials will be high ($1 - \gamma$). Aidt argues that this can create multiple equilibria, where the past number of corrupt officials will determine to which equilibria the society will shift to. This function can be plotted into a two-dimensional coordinate plane (Figure 3), where axes represent the proportion of corrupt officials ($1 - \gamma$) and show the equilibrium points with different levels of corruption.

The point L corresponds to "stable low-corruption equilibrium", which is achieved when the number of corrupt officials was low (less than $1 - \gamma^M$) in the past. If the number of corrupt officials was high (more than $1 - \gamma^M$), then the society will shift to the point H, "a stable high-corruption equilibrium". The final point in the figure (M), is an unstable equilibrium that is somewhere between the first two points and serves more as a reference point to determine whether a high or low corruption equilibrium will happen. The dotted line shows an alternative function, which has had an anti-corruption strategy implemented (in this case a significant wage incentive) and thus the curve has shifted enough downwards to eliminate the high-corruption equilibrium. In this situation corruption "is solved" and the low-corruption equilibrium achieved, but since change itself must be notable enough for this to happen, small changes are useless and even detrimental since social welfare might be lost. I will introduce this concept called by Aidt as "a big push" again in the later chapters.
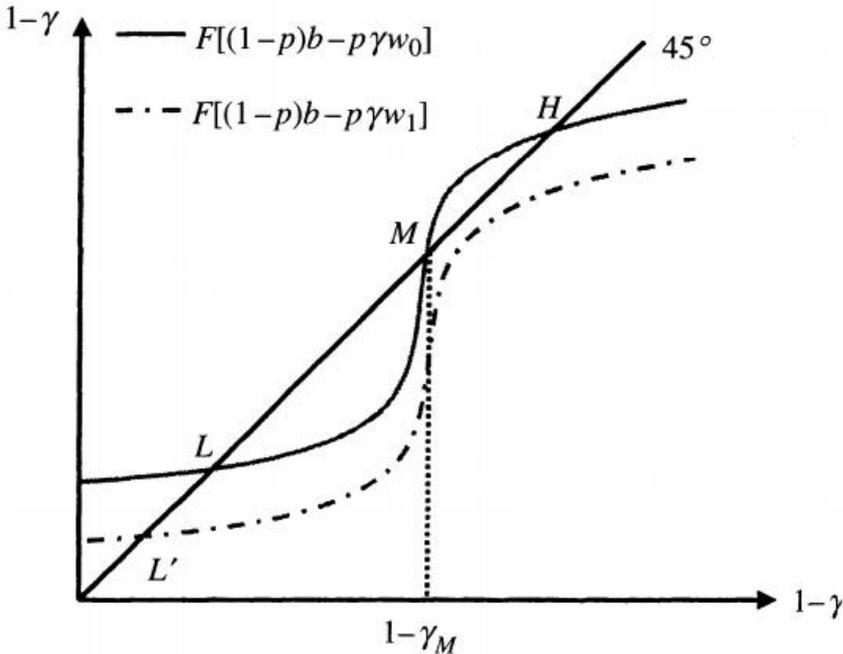

Figure 3: Three equilibria of corruption (Aidt 2003)

4.3 The significance of benevolence in corruption

The final element from Aidt's paper from 2003 that is important to understand corruption better is the distinction between theories assuming a benevolent principal and a non-benevolent principal. Under the assumption of a benevolent principal, corruption controls from chapter 3 can be useful by creating optimal institutions that incentivize, punish, and monitor to minimize corruption in societies, although as can be learned from the example in chapter 4.1, fully minimizing corruption might not be preferable for a society which maximizes its social welfare. To design better institutions, he argues the assumption of a benevolent principal must be discarded, since the nature of the institutions cannot be left out of the equation, when changing them fundamentally.

Aidt links this assumption of a non-benevolent principal to the "grabbing hand" model, a way to view the government's interaction with markets. This term was invented by Shleifer and Vishny to give an alternative view to the ideas of the "invisible hand", where the government should not intervene with the markets, since they would work well as individual businesses were guided by their self-interest, and the "helping hand", where the government can join the market to help development (Shleifer & Vishny, 2002). The helping hand thus from a principal-agent perspective assumes a benevolent principal, the government. Grabbing hand on the other hand expects the government officials to go after rents in the markets, which results in inefficiencies since they can for example to extract bribes create entry restrictions (Aidt, 2016).

The point made in Aidt's paper is that both views, the helping hand(a benevolent principal) or the grabbing hand (a non-benevolent principal), offer valuable contributions to the study of corruption, and in this paper's case, the study of anti-corruption. While it might be naïve to consider every country to have a benevolent government, understanding the ways to optimize institutions can be helpful to combat corruption. And in Nordic countries for example it is not far-fetched to consider the governments to be almost fully benevolent, at least when it comes to corruption. But since most countries where corruption is a big problem, the country is already riddled with it, anti-corruption strategies should aim to consider every part of the society to possibly be corrupt. In the next chapter an alternative way to model corruption is introduced, which is heavily linked to the findings of the study by Aidt I've introduced in the last two chapters.

5. Criticism against the principal-agent problem and introduction of collective action theory

The agency theory approach to the study of corruption has clearly been the dominant one, as Ugur and Dasgupta (2011) demonstrate in their meta-analysis of corruption's impact on economic growth, where the dominant way to construct the models was through a principal-agent model's principles in 115 reviewed studies. In the recent years a new wave of anti-corruption research has grown popularity (Mungiu-Pippidi, 2011; Persson et al., 2013; Rothstein, 2011; Rothstein & Varriach, 2017), with their uniting view being the opposition towards agency theory, and replacing it with a new more applicable theory. According to these papers, corruption as a principal-agent problem is an outdated view, and a big reason, why anti-corruption reforms have not worked as well as expected. These authors have suggested an alternative approach to corruption, instead of treating it as a principal-agent problem, corruption should really be a problem of collective action. Next, I will explain the reasoning behind the reduced attention towards agency theory in anti-corruption literature and the so called "new approach" using collective action theory.

5.1 Limitations of principal-agent model

While the opposition towards the implementation of agency theory on anti-corruption strategies began mostly only about ten years ago, agency theory itself has always had some opposition, especially the economics view of agency theory. Some scholars have for example criticized the typical economics assumption of a self-interested utility maximizer in the classical agency theory and Perrow (1986) argues parties can be other-regarding and altruistic depending on the setting or organizational structure. This line of thinking was adapted in management literature as stewardship theory, which emphasizes the agents' tendency to in fact be cooperative and coordination seeking. Other social sciences have also criticized the classical agency theory for its simplicity and how in real life problems are not just two-sided, instead there are usually more participants, who can also possibly be both principals and agents.

These critiques are somewhat outdated now though, since a lot of agency models allow for more complex organizations with multiple principals and agents (e.g. Bac, 1996). In fact, the principal-agent problem of corruption can be characterized as a "double" principal-agent problem (Marquette & Peiffer,

2018), since while it has the bureaucratic corruption's principal-agent relationship between a higher ranked politician (principal) and a lower ranked public official (agent), it also has another principal-agent relationship between citizens (principal) and all the public officials (agent). Thus, a public official can be both a principal and an agent at the same time, which leads to the perhaps biggest flaw in the principal-agency model applied to corruption.

As can be seen from some of the previous examples, the agency theory favors the principal mostly, and the problems are usually assigned to the agent. Especially in agency theories applied to the theory of firm, the stockholders' utilities maximizations are the focus of the theory, and in those models the principals are assumed to be benevolent while the agents are possibly malevolent. This assumption of an always benevolent principal is the reason why especially in the study of corruption, agency theory can become a problematic framework according to the opposers of agency theory, since the bureaucrat that is supposed to be the benevolent party in one relationship, can also be malevolent in another relationship. In such a situation, while the agent is supposed to be a rational and self-interested maximizer of utility, the principal supposedly tries to maximize the social welfare of its principal, the citizens (Persson et al., 2013). And if the system is corrupted from the top high-ranking bureaucrats to the bottom low-ranking bureaucrats, would these high-ranking bureaucrats hold their agent part accountable for corruption, since they could demand a proportion of the corrupt act (bribe for example) to himself in exchange for not reporting the incident. Collective action theory works especially in these types of situations, where everyone is already supposed to be a part of a corrupt system.

5.2 Collective action theory

While the application of collective action theory is relatively new to the literature of corruption, the foundation of collective action theory was made by Olson in 1965. His argument was that even though the past economics study had assumed a group of rational and self-interested individuals to try to achieve a common objective, if everyone would be better off when this objective was reached, the "rational, self-interested individuals will not act to achieve their common or group interests" (Olson, 1965). This leads to classic collective action problem, where the common objective is not achieved because there is a possibility to "free-ride" if the benefit from that common objective cannot be excluded from the non-participants. This leads to situation where common objective will not be achieved by its "fullest potential" as some individuals will choose to free-ride.

After the Olson's paper multiple authors have studied the factors that affect individual's reluctance to participate in the reach of the common objective. An important reason seems to be how the participants perceive the others to act, and thus they make decisions how they should act based on these assumptions (Ostrom, 1990; Persson et al., 2013). This is mostly why collective action theory is argued to be applicable to the study of corruption, as even an honest principal will be susceptible to corrupt behavior if they assume everyone else is corrupted. Thus, a society riddled with corruption will stay that way as the participants perceive the society to be corrupted. Persson et al. (2013) also point out, that even if the majority disapprove corruption and see that they lose by allowing corruption, they will choose participate in corruption, as being benevolent will be costly in the short-term, since their actions will not change the equilibrium of perceptions (Della Porta and Vannucci, 1999; Rothstein 2011).

For anti-corruption literature, collective action theory gets rid of the assumption that there is a benevolent principal that oversees anti-corruption strategy attempts, and thus is suitable to societies with a high level of corruption. Persson et al. (2013) do not deny, that monitoring and punishments would not work to reduce corruption, but that a non-benevolent principal would not held accountable the corrupt agents, which would mean they would be free to be corrupt without concern. Using corruption control methods from the principal-agent model could even be detrimental, as they induce unnecessary costs without the benefits. Failed corruption control attemptions can also cause cynicism, which would lead perception of corruption in society to get even worse (Persson et al., 2013; Mungiu-Pippidi, 2006; Karklins, 2005)

The way to fix corruption according to the collective action theory, is to completely change the way the individuals in situations, where corruption is possible, perceive the other individuals (Persson et al., 2013). They need to be assured, that there is no corruption in the system, or at least that the corruptible ones get caught. What Persson et al. call this radical change of the system is "big push", a term that Aidt (2003) used in his paper as well. Persson et al. summarize that the successful anti-corruption reforms in Sweden, Denmark, The United States, Hong Kong, and Singapore used a combination of "formal" and "informal" mechanisms to make the push to low corruption society. These included the control methods supported by the agency theory, monitoring and punishment mechanism, and establishing reciprocity and trust. They also make a note from a previous study on Hong Kong and Singapore, that top-down approach, where the high-ranking politicians through their example establish trust, can change the assumption of corruptness in a society (Root, 1996). Again, one can connect these methods to the arguments made by Aidt, who also saw the "big push" coming from both changing the foundation of the institutions (the non-benevolent principal approach) as well as optimizing these institutions (the benevolent principal approach). Persson et al. even mention the needed shift from a corrupt equilibrium towards a less corrupt one. Even if Aidt did not link his research directly to the

theory of collective action, he saw the same problems as the supporters of that theory and surprisingly the solution methods were also quite similar.

6. Conclusions

In this literature review I have used the critical piece of corruption literature by Aidt to raise some important factors related to the ongoing battle with corruption. From his paper an easy way to construct corruption controls was modeled, which I divided into three groups: wage incentives, monitoring systems, and punishments. These three controlling types were already known from the previous economic literature, and some empirical research had already been done to test them. No conclusive answer for their usefulness could be given though, as these anti-corruption methods seem to not work in practice if used without any other methods (Persson et al., 2013). Still, monitoring and incentive methods have some empiric relevance showing that they should not be ignored while planning an anti-corruption strategy.

The assumption of a persistent corruption can be seen from the model in Aidt's paper, which is relevant to the changing view on corruption. While Aidt also emphasizes on the importance of the corruption happening between individuals, which is the way agency theory sees corruption, there seems to be a bigger picture which would need to be changed for a society to truly lower its corruption level. In Aidt's example a move from a high-corruption equilibrium is not possible without a "big push", a radical change which would deny the effect of past corruptness. This view is also shared by the new wave of anti-corruption literature, that aim to view corruption not as individualistically as agency theory, since the collective perception of others is for them the most important part to consider.

As this line of thinking is new it is still not enough developed to be used as the "truth" in corruption literature. Especially the lack of past research (Marquette & Peiffer, 2018; Persson et al., 2013) is an important reason why collective action theory is still too immature to make conclusions of its rightfulness. There are some signs that imply its significance in corruption, as can be seen from the survey Persson et al. presented in their paper, where Kenyan and Ugandan informants were interviewed. Their answers seemed to align with the theories of collective action and thus it should be considered when creating an anti-corruption strategy.

What can be concluded is that while agency theory has its flaws, and collective action theory is still a new theory in the research of corruption, both offer some important insights in the battle against

corruption, so to completely ignore either of them would be foolish (Marquette & Peiffer, 2018). A good way to think of anti-corruption could be something that Aidt recommended in his paper, where incentives and monitoring are used in the optimization of institutions, but to really get rid of corruption, societies would need to completely change the institutions, as they could be already corrupted, and optimization would be pointless then.

References

Abbink, K., Irlenbusch, B., & Renner, E. (2002). An experimental bribery game. Journal of Law, economics, and organization, 18(2), 428-454.

Aidt, T. S. (2003). Economic analysis of corruption: a survey. The Economic Journal, 113(491), F632-F652.

Aidt, Toke S. (2009). Corruption, Institutions, and Economic Development. Oxford Review of Economic Policy 25(2): 271–91.

Aidt, T. S. (2016). Rent seeking and the economics of corruption. Constitutional Political Economy, 27(2), 142-157.

Akçay, Selçuk. (2006). Corruption and Human Development. Cato Journal 26(1): 29–48.

Andersen, T. B. (2009). E-Government as an anti-corruption strategy. Information Economics and Policy, 21(3), 201-210.

Askari, Hossein, Scheherazade S. Rehman, and Noora Arfaa. (2012). Corruption: A View from the Persian Gulf. Global Economy Journal 12(1): article 1.

Bac, M. (1996). Corruption and supervision costs in hierarchies. Journal of comparative economics, 22(2), 99-118.

Bardhan, P. (1997). Corruption and development: a review of issues. Journal of economic literature, 35(3), 1320-1346.

Becker, G. S. (1968). Crime and punishment: An economic approach. In The economic dimensions of crime (pp. 13-68). Palgrave Macmillan, London.

Becker, G. S., & Stigler, G. J. (1974). Law enforcement, malfeasance, and compensation of enforcers. The Journal of Legal Studies, 3(1), 1-18.

Bhattacharyya, S. and Hodler, R. (2015) Media freedom and democracy in the fight against corruption. European Journal of Political Economy 39: 13–24.

Brunetti, A., & Weder, B. (2003). A free press is bad news for corruption. Journal of Public economics, 87(7-8), 1801-1824.

Camaj, L. (2013). The media's role in fighting corruption: Media effects on governmental accountability. The International Journal of Press/Politics, 18(1), 21-42.

Colonnelli, E., & Prem, M. (2020). Corruption and firms. Available at SSRN 2931602.

Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. Journal of financial economics, 51(3), 371-406.

Costa, S. (2013). Do freedom of information laws decrease corruption?. The Journal of Law, Economics, & Organization, 29(6), 1317-1343.

Della Porta, D., & Vannucci, A. (1999). Corrupt exchanges: Actors, resources, and mechanisms of political corruption. Transaction Publishers.

Di Tella, R., & Schargrodsky, E. (2003). The role of wages and auditing during a crackdown on corruption in the city of Buenos Aires. The Journal of Law and Economics, 46(1), 269-292.

Egger, Petter and Hannes Winnerb. (2005). Evidence on corruption as an incentive for foreign direct investment. European Journal of Political Economy

Egger, Peter, and Hannes Winner. (2006). How Corruption Influences Foreign Direct Investment: A Panel Data Study. Economic Development and Cultural Change 54(2): 459–86.

Elbahnasawy, N. G. (2014). E-government, internet adoption, and corruption: an empirical investigation. World Development, 57, 114-126.

Foltz, J. D., & Opoku-Agyemang, K. A. (2015). Do higher salaries lower petty corruption? A policy experiment on West Africa's highways. Unpublished Working Paper, University of Wisconsin-Madison and University of California, Berkeley.

Gallas, Daniel. (2019). Odebrecht: Gigantic Corruption Scandal Shows No Sign of Waning." BBC News, BBC, 17 Apr. 2019, www.bbc.com/news/world-latin-america-47969732.

Gans-Morse, J., Borges, M., Makarin, A., Mannah-Blankson, T., Nickow, A., & Zhang, D. (2018). Reducing bureaucratic corruption: Interdisciplinary perspectives on what works. World Development, 105, 171-188.

Groenendijk, N. (1997). A principal-agent model of corruption. Crime, Law and Social Change, 27(3-4), 207-229.

Habib, Mohsin, and Leon Zurawicki. (2002). Corruption and Foreign Direct Investment. Journal of International Business Studies 33(2): 291–301.

Hasty, J. (2005). The pleasures of corruption: desire and discipline in Ghanaian political culture. Cultural Anthropology, 20(2), 271-301.

Jain, A. K. (2001). Corruption: A review. Journal of economic surveys, 15(1), 71-121.

Johnston, Michael. (2005). Syndromes of Corruption. Cambridge: Cambridge University Press.

Kangle, R. P. (1972). The Kautiliya Arthasastra Part II. University of BOMBAY.

Karklins, Rasma. (2005). The System Made Me Do It: Corruption in Post-Communist Societies. Armonk, NY: M.E. Sharpe.

Kiser, E. (1999). Comparing varieties of agency theory in economics, political science, and sociology: An illustration from state policy implementation. Sociological Theory, 17(2), 146-170.

Klitgaard, R. (1988). Controlling corruption. Univ of California Press.

Laffont, J. J., & N'Guessan, T. (1999). Competition and corruption in an agency relationship. Journal of Development Economics, 60(2), 271-295.

Lee, S.-H., & Weng, D. H. (2013). Does bribery in the home country promote or dampen firm exports? Strategic Management Journal, 34: 1472–1487.

Leff, N.H. (1964). Economic development through bureaucratic corruption. American Behavioral Scientist 8: 8-14.

Lu, H., & Zhang, L. (2005). Death penalty in China: The law and the practice. Journal of Criminal Justice, 33(4), 367-376.

Marquette, H., & Peiffer, C. (2018). Grappling with the "real politics" of systemic corruption: Theoretical debates versus "real-world" functions. Governance, 31(3), 499-514.

Mauro, Paolo. (1995). Corruption and Growth. Quarterly Journal of Economics 110: 681–712.

Méon, P. G., & Weill, L. (2010). Is corruption an efficient grease?. World development, 38(3), 244-259.

Mironov, M. (2005). Bad corruption, good corruption and growth. University of Chicago. Miméo.

Mungiu-Pippidi, Alina. (2006). "Corruption: Diagnosis and Treatment." Journal of Democracy 17 (3): 86–99.

Mungiu-Pippidi, A. (2011). Contextual choices in fighting corruption: Lessons learned. Norwegian Agency for Development Cooperation.

Musila, J.W. and Sigue, S.P. (2010) Corruption and international trade: an empirical investigation of African countries. The World Economy 33(1): 129–146.

Olson, M. [1965](2009). The Logic of Collective Action: Public Goods and the Theory of Groups, Second Printing with a New Preface and Appendix (Vol. 124). Harvard University Press.

Ostrom, E. (1990). Governing the commons: The evolution of institutions for collective action. Cambridge university press.

Panda, B., & Leepsa, N. M. (2017). Agency theory: Review of theory and evidence on problems and perspectives. Indian Journal of Corporate Governance, 10(1), 74-95.

Panizza, U., di Tella, R., & Van Rijckeghem, C. (2001). Public sector wages and bureaucratic quality: Evidence from Latin America [with comments]. Economía, 2(1), 97-151.

Perrow C. (1986). Economic theories of organization. Theory Soc. 15:11–45

Persson, A., Rothstein, B., & Teorell, J. (2013). Why anticorruption reforms fail—systemic corruption as a collective action problem. Governance, 26(3), 449-471.Reiter, S. L., and H. Kevin Steensma. 2010. "Human Development and Foreign Direct Investment in Developing Countries: The Influence of FDI Policy and Corruption," World Development 38(12): 1678–91.

Reiter, S. L., & Steensma, H. K. (2010). Human development and foreign direct investment in developing countries: the influence of FDI policy and corruption. World development, 38(12), 1678-1691.

Root, Hilton L. (1996). Small Countries, Big Lessons: Governance and the Rise of East Asia. Hong Kong: Oxford University Press.

Rose-Ackerman, S. R. (1978). Corruption: A study in political economy. Nova Iorque: Academic Press.

Rose-Ackerman, S., & Palifka, B. J. (2016). Corruption and government: Causes, consequences, and reform. Cambridge university press.

Rothstein, Bo. (2011). Anti-Corruption: The Indirect 'Big Bang' Approach. Review of the International Political Economy 18 (2): 228-250.

Rothstein, B., & Varraich, A. (2017). Making sense of corruption. Cambridge University Press.

Shleifer, A., & Vishny, R. W. (1993). Corruption. The quarterly journal of economics, 108(3), 599-617.

Shleifer, A., & Vishny, R. W. (2002). The grabbing hand: Government pathologies and their cures. Harvard University Press.

Smith, Adam. [1776](1976). The Wealth of Nations. Chicago: University of Chicago Press.

Transparency.org. "Corruption Perceptions Index." Transparency International
www.transparency.org/en/cpi. (accessed August 30, 2020)

Transparency.org. "What Is Corruption?", Transparency International.
www.transparency.org/en/what-is-corruption. (accessed July 17, 2020)

Treisman, D. (2007). "What have we learned about the causes of corruption from ten years of cross-national empirical research?". Annu. Rev. Polit. Sci., 10, 211-244.

Unodc.org. "UNODC and Corruption." United Nations : Office on Drugs and Crime,
www.unodc.org/unodc/en/corruption/index.html. (accessed September 1, 2020)

Ugur, M., & Dasgupta, N. (2011). Evidence on the economic growth impacts of corruption in low-income countries and beyond: a systematic review. EPPI-Centre Social Science Research Unit, Institute of Education, University of London.

Van Rijckeghem, C., & Weder, B. (2001). Bureaucratic corruption and the rate of temptation: do wages in the civil service affect corruption, and by how much?. Journal of development economics, 65(2), 307-331.

Vargas, G. A., & Schlutz, D. (2016). Opening public officials' coffers: A quantitative analysis of the impact of financial disclosure regulation on national corruption levels. European Journal on Criminal Policy and Research, 22(3), 439-475.

Wei, Shang-Jin. (2000). How Taxing Is Corruption on International Investors?. The Review of Economics and Statistics 82(1): 1–11.

Worldbank.org. "Combating Corruption." World Bank,
www.worldbank.org/en/topic/governance/brief/anti-corruption#:~:text=The%20World%20Bank%20Group%20considers,of%20people%20in%20developing%20countries. (accessed September 1, 2020)