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"CORRUPTION AND EXTREMISM: A THEORETICAL APPROACH"

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1. INTRODUCTION

This thesis is aimed at rationalizing the recurring outbreak of extremist movements, with a focus on their link with corruption. We will describe this connection with the help of a rational choice model involving a causal relationship between the presence of corruption in a country and the popular support granted to an extremist movement.

Our reasoning is that there is a causal link between how much a governing class is corrupted and the presence of violent extremism. As a matter of fact, corruption on a large scale often results in and from poor governance, and leads to a framework characterized by anger, moral outrage and strong refusal for a system that allows a strict circle of people to thrive through dishonesty. Sarah Chayes (2016) describes several possible elements of corruption that drive people to join extremist movements: the humiliation inflicted on victims, the lack of recourse, the structure and sophistication of corruption networks or the colossal sums being stolen. Anyway, this link, despite corruption being a common denominator of violent extremisms, is many times overlooked or ignored by who is in charge to find countermeasures to extremism and terrorism.

First of all, in chapter 2 we will analyze the main reasons that generate extremism, its goals and strategies according to the principal economic policy literature, while at the same time looking for a definition of what can be considered an "extremist movement".

After that, in chapter 3 we will briefly illustrate the major features and consequences of corruption and we will go deeper through the theoretical explanations of why it can create a context where extremism can prosper.

Furthermore, chapter 4 will discuss the reasons behind the link between corruption and extremism, providing some anecdotal evidence from the Indonesian elections of the first 2000s. Further on in the same chapter we will give an overview of the main other theoretic models aimed at explaining what could generate grievances, rebellion or extremism within a community. We will revise also the main models giving a rational explanation to the strategies of terrorism and we will discuss how those acts can fit in a rational choice model.

Chapter 5 will be dedicated to describing the outbidding between Palestinian factions during the Israeli-Palestinian conflict, outlining the use of terrorism as a signaling device.

Then, we will present in chapter 6 the core of this thesis: a new model explaining what can influence the popular support to an extremist party, with a connection to the degree of corruption of the incumbent government. We will describe how citizens decide in a context of electoral competition, with the extremist party opposed to a more moderate alternative. Moreover, we will explain the characteristics of the various possible equilibria of the model and we will discuss in which situations it is more likely for extremist movements to gather popular consensus.

2. EXTREMISM

When can an organization be considered an extremist political movement? Essentially, extremism can be defined as holding an extreme ideology or belief: some ideologies or religions in fact have this intrinsic feature for which they can be followed either in an extreme or in an intermediate manner.

There is often some blurring between extremism and terrorism since in many cases these two terms can overlap, and an extremist movement may be also a terrorist one. However, this overlapping does not have to be necessary. Terrorism is characterized by political violence targeting "noncombatants" with various and different goals that we will describe later on. Extremism does not unavoidably feature violence or intention to hurt specific groups of people. With no doubts these two terms may coincide since acts of terrorism such as killing of civilians could be put in motion because terrorists hold an extreme view of an ideology, but it does not have to be always the case. Thus, a terrorist may not necessarily be an extremist: for example, in the case of the secessionist Irish movement people had a reasonable view of the entitlements of their nation to be independent but still committed acts of terrorism because it was probably the only way to achieve them. Moreover, extremism does not in every case imply terrorism since holding extreme view of an ideology does not mean to be prone to committing violent acts.

A political organization may manifest its extremism through the behavior of its supporters: their beliefs, attitudes, feelings, actions, strategies that are far from the ordinary and thus extreme. It is often hard to define what is ordinary and what is far from ordinary, since these definitions are meant to adapt to the cultural, social and historical framework where a group emerges. Peter Coleman and Andrea Bartoli (2003), while trying to define extremism, argue that "Typically, the same extremist act will be viewed by some as just and moral (such as prosocial "freedom fighting"), and by others as unjust and immoral (antisocial "terrorism") depending on the observer's values, politics, moral scope, and the nature of their relationship with the actor".

Therefore, while talking about extremism it is necessary to keep in mind that some flexibility is needed, and that the classification of a movement as extremist must be flexible to the context where the movement is born. In the case of our model we will consider a political party which is considered to be extremist since it has way stronger ideological roots than another moderate party present in the political framework described. This extremist movement will have also the possibility to engage in violent terrorism, but will not be obliged to do so.

2.a Factors that may generate extremism

What are the reasons that could drive people to join extremists and rise up against their government? And what allows the extremist movements to prosper and to increase their popular support? There could be a vast variety of motives and scopes, always in relation to the socio-economic and historical framework in which these movements arise. Let us give an overview of what the existing economic policy literature said about this topic.

The United States Agency for International Developments provides a summary of economic factors affecting violent extremism and divides them in three main categories:

- Enabling environment factors (for example, weak states with ineffective security services or even public support for violent extremist groups);
- **Pull factors** (which frequently work on individual level, attracting people to join extremists; a pull factor could be for instance the provision of goods and services not guaranteed to citizens by the incumbent government);
- **Push factors** (that are usually socioeconomic, political, and cultural in nature: in other words, factors that shove people to seek an escape from their lives through affiliation with extremist groups; a common example of a push factor is social exclusion)

The distinction between "push" and "pull" factors is recurrent in many econometric studies about the roots of extremism and some authors have been trying to understand which of the two effects is prevalent. For instance, considering extremism as outbreak of rebellion within a country, Paul Collier and Anke Hoeffler (2004) investigate whether rebellion is motivated more by greed (opportunity) or grievances existing among rebels. They discuss this matter with the help of a detailed econometric model considering 79 civil wars during the period 1960-1999, with several proxies for opportunity and for grievances linked to the probability of outbreak of civil conflicts. They find out that rebellion seems to be more motivated by greed than by grievances in most of the cases they took into consideration. The factors used as proxies of opportunity that statistically best predict the probability of conflict onset are:

- Presence of natural resources that can be extorted by insurgents.
- **Diasporas** (meant as scattering of a group from a country) of citizens, that increases the risk of conflict renewal.
- Male secondary education, per capita income, income growth rate, that all reduce conflict risk since they can be interpreted as proxies of the earnings foregone during rebellion.
- Dispersed population.

Within all the variables used to proxy grievances among the population, only the size of population positive influences the risk of conflict. To interpret this link, the authors argue that a bigger population is also more ethnically/religiously heterogeneous, with an increased probability of distinct groups entering in a conflict.

Sarah Chayes (2015) explains how the events of the Arab Spring in 2011 were to be considered a revolt against Western-fueled kleptocracies across the entire region. She argues that rebellion, which was expressed through Islamic extremism, exploded due to the popular frustration about the failure of existing legal systems and political institutions, which were in charge to protect citizens from their corrupt rulers. This hypothesis is reinforced by Natascha S. Neudorfer and Ulrike G. Theuerkauf (2014), who add one more factor that could fuel extremist groups: ethnic diversity. Grievances, they claim, are more likely to happen among those ethnic groups who cannot take advantage from existing corrupt practices, and likewise ethnicity can become a fault line of violent conflicts. We will go more in details about the link between corruption and extremism in chapter 4, since this connection is fundamental in order to build our model.

Furthermore, Michael Ross (2006) points out that natural resources such as oil and other minerals tend to foster rebellion and civil wars as they make independence more desirable for resource-rich regions. This resource abundance could even become a damnation, as many other economists point out (the "resource curse" is how it is defined the paradox for which countries with loads of natural resources tend to have less economic growth, less democracy, and worse development outcomes than countries with fewer natural resources), and can trigger nationalist and separatist conflicts. There are more contributes that support this link

between resources and civil violence onset, and many analysts give explanations based more on politics than economics (e.g., see Auty (2004), Humphreys (2005), Snyder and Bhavnani (2005), for arguments based on state strength). According to their view, resource-rich economies are more likely to suffer from weak and unaccountable leadership, and thus are not able to diversify the economy and guarantee the public goods associated with economic prosperity. Alternatively, dictatorships and generally oppressive regimes might be invited by resource richness, hence generating genuine grievances among a share of the population (Fearon and Laitin 2003).

Furthermore, one of the doubtlessly most crucial factors that pushes citizens to join extremists is the lack of a solid government and of sound institutions. A weak state that has scarce territorial control gives extremists the possibility of acquiring military and organizational skills. The recruitment of followers for extremist groups is way easier without the presence of institutions that guarantee security and protection for citizens. There is compelling evidence that state weakness is a consistent predictor of the outbreak of civil wars and terrorist attacks, as for example the case in Nigeria of Boko Haram demonstrates. Corinne Graff (2010) analyses what are the vulnerabilities of a poor and weak state that give to extreme movements the chance to prosper:

- Lack of control over territory, that facilitates recruitment activities.
- Porous borders, with no barriers for trafficking and passage of weapons and recruits.
- Lack of effective regulation and weak law system which allow extremists to establish illegal businesses and raise funds for their activities.
- **Inadequate social welfare**, that causes grievances amongst the population and spreads passive support for violent extremism.
- **Corruption**, which delegitimizes the government officials at the eyes of the citizens and increases their active or passive supports for extremists.
- **Poverty**, which makes the life of a rebel more attractive since the legal income opportunities are insufficient or unattractive.
- **History of violence and conflict**: this causes individuals to search for protection joining extremist groups.

Speaking of the causal link between poverty and extremism, it does not have to be a rule: there is a general consensus between researchers that this link is non-existent or really weak.

In fact, while in many Muslim countries extremist movements gain most support among uneducated impoverished young men with few employment opportunities, in other cases extremists are well-educated and high skilled individuals who decide to join the battle for social injustice. Moreover, the causality could be reverse: extremism and civil conflicts, in fact, may contribute to weaken living standards.

2.b Main strategies of extremism and terrorism

Extremists may have different goals to achieve, with a vast variety of tactics and strategies to pursue them. In this chapter we will examine what might be the strategies of extremist and terrorist groups, since it will be useful later to understand the actions of the players in our model. As we said when we gave the definition of extremism, an extremist group is not necessarily a terrorist organization, but crosses this line as soon as it makes use of more or less undiscriminating violence against civilians to directly or indirectly achieve its purposes.



Figure 1 – 10 Deadliest terrorist organizations by numbers killed (2000-2013)

Source: https://www.dawn.com/news/1145300

In Figure 1, we can observe what have been the deadliest terrorist organizations in the first part of the 2000s: Taliban (operating mainly in Afghanistan and Pakistan) ranks first.

Unfortunately, terrorism has been so successful during last years that between 1980 and 2003 half of all suicide terrorist campaigns were closely followed by substantial concessions by the target governments. Hijacking planes, blowing up buses, and kidnapping individuals do not give the impression to be rational acts, but these strategies often allow to reach the terrorist group's political goals with proved effectiveness. Andrew Kydd and Barbara Walter (2006) describe in detail what are the main strategies implemented by groups such as Al Qaeda, Hamas and Tamil Tigers. These organizations always start in a position of weakness with respect to the government in force to which they stand against: since it is hard for weak actors to make credible threats, terrorists are pushed to display publicly just how far they are willing to go to obtain their desired results. Given that it will be useful later to our model, we now focus on the terrorist strategies of costly signaling, that are mainly five: attrition, intimidation, provocation, spoiling, and outbidding. In an attrition strategy, terrorists seek to persuade the enemy that they are strong enough to impose considerable costs if it keeps following a particular policy. Instead, terrorists using intimidation try to persuade the population that they are strong enough to punish disobedience and that the government is too weak to stop them, so that people are pushed to behave as the terrorists wish. A **provocation** strategy is an attempt to induce the enemy to respond to terrorism with indiscriminate violence, which would radicalize the population and move them to support the terrorists. Moreover, spoiling attacks aim at convincing the enemy that moderates on the terrorists' side are weak and untrustworthy, thus undermining the attempts to reach a peaceful agreement. Finally, factions engaged in outbidding use violence to demonstrate to the domestic audience that the terrorists have greater resolve to fight the enemy than rival groups, and therefore are worthy of support. Being in charge to find effective antiterrorist policies means also having a clue of these five distinct strategic logics.

To further categorize these strategies, we choose two variables that distinguish them: uncertainty and target of persuasion. Uncertainty has indeed always been understood to be a cause of conflict. The disagreement could be for example about each party's power, resolve or willingness to fight but also about trustworthiness: if individuals do not trust each other, they have an incentive to start an attack, instead of risking to be attacked by surprise. In these situations of uncertainty, communication has a key role in preventing conflict. Unfortunately, since talk is cheap, verbal statements are usually not convincing enough, thus players have to bear costs in order to signal their power/resolve/trustworthiness. The ultimate example of costly signaling is war itself, or the willingness to endure it, that may be used as a forceful signal of resolve and could provide believable information regarding power and capabilities. Moreover, what could be the target that extremists want to persuade? One is definitely the government in charge, that may grant concessions over policy or territory to these extreme factions. The other possible target of persuasion is the domestic audience, which is fundamental in providing resources to the extremist group. Figure 2 below displays the possible combinations between the three subjects of uncertainty we mentioned (power, resolve, trustworthiness) and the two targets of persuasion (hostile government and domestic audience): we obtain the five strategies we listed previously.



Figure 2 – Main strategies of terrorism

Source: Kydd a. and Walter B., "Strategies of Terrorism", International Security, Vol. 31, No. 1 (Summer 2006)

It is possible that an extremist group pursues more than one of these strategies at the same time, to be more effective in achieving its goals. If we think for example of the terrorist attacks of 9/11, they could belong to both an attrition and a provocation strategy. On one hand Al-Qaeda could have been trying to weaken the financial core of United Stated by targeting its heart, raising thus the costs of the USA policy of keeping soldiers in Saudi Arabia. On the other hand, Al-Qaeda may have attempted to provoke an extreme military response from United States, that would later radicalize the world's Muslim population.

It's necessary to take a deeper look at the possible strategic moves of extremists, to further understand what objectives they could pursue and how they chase them. In addition, we will discuss which conditions favor the success of these five strategies.

ATTRITION

As we said before, the task of a strategy of attrition is to convince the hostile part that the extremist group has enough power and resolve to inflict serious damages and to cause huge problems to its counterpart. In this context, the more harmful a terrorist attack is, the more credibility the group gains at the eyes of the government: consequently, the more likely it is that the government will grant concessions. We could list numerous examples of this attrition strategy but perhaps the most significant one is provided by Hezbollah and Hamas in their attacks against Israel. Yahya Ayyash (one of the most influential figures of Hamas), in a letter written in the early 1990s, declared that their target was to "make the cost of occupation that much more expensive in human lives, that much more unbearable". Suicide terrorism is a solution often chosen by weak nationalist actors in order to inflict huge damages to opponent occupiers: the more costs extremists are able to inflict, the more likely it will be that the enemy will withdraw its occupying forces.

Focusing on the conditions that could influence the effectiveness of a strategy of attrition, we can list three: the state's level of interest in the issue under dispute, the constraints on its ability to retaliate, and its sensitivity to the costs of violence. If a state holds more interests for example in a territory that claims independence or if it has greater retaliation strategies, it will be more difficult for extremists to obtain the concessions they ask for. Often democracies, for instance, are more reluctant to harshly repress violent extremism than authoritarian regimes. Also, the sensitivity to costs of violence is affected by regime type: democracies may be less able to tolerate the painful effects of terrorism than non-democracies.

One of the most famous examples of an attrition strategy pursued by a terrorist group is al-Qaeda's war with the United States. Al Qaeda's goal - policy change - is well suited to an attrition strategy and their deceased leader Bin Laden had frequently argued that the United States lacked the resolve to fight a long war of attrition.

INTIMIDATION

Intimidation is the strategy used by extremists to demonstrate to their own population that they have power to punish whoever disobeys them and that the government is unable to counteract effectively.

Usually, this strategy is implemented by targeting the government's key figures and supporters, such as mayors, police, prosecutors, and pro-regime citizens. One of the goals of terrorists using intimidation may be to gain wider social control over the population: pursuing this strategy could be effective in contexts where a government refuses to implement a policy that both terrorists and part of the population favor. Here terrorists may use selective violence to obtain compliance among citizens: an example of this situation is provided by American anti-abortion groups bombing clinics during the 80s and 90s to prevent individuals from performing or seeking abortion.

If the extremists pursue social control, facing a weak state will help them in implementing an intimidation strategy. When the justice system is unable to punish and prevent crimes linked to intimidation, citizens will be more prone to search protection from non-state factions (for example, local militias). Moreover, if some sympathizers or even member of the extremist group are part of the justice system, an intimidation strategy will find fertile ground since police and courts will be less able to prosecute crimes.

PROVOCATION

Let's discuss now the strategy of provocation, in which an extremist group wants to persuade the domestic audience that the target of the attack is untrustworthy and must be fought against. In some cases, the goal is to "radicalize" a moderate part of the population and to make them lose faith in the incumbent regime. Moreover, if a government decides to respond to an attack, it may reveal essential information about itself to the population. This is the thesis developed by Bueno de Mesquita and Dickson (2007), who argue that if a government implements an undiscriminating counterterrorism response to an attack it will convince many citizens that it is unconcerned with their welfare. Thus, the constraints that the government has on retaliation constitute a relevant factor that strongly influences the effectiveness of a provocation strategy: if a government is unable to discriminate its counterterrorism attacks to hit only terrorists, it will be a good target for a provocation strategy. A large-scale military response, for example, may radicalize a moderate part of the population and make it more favorable to extremists' arguments. Unfortunately, the more a counterterrorism tool is discriminating (for instance, infiltrating terrorist cells, sharing intelligence with other countries or arresting individuals), the less it is visible to the public. Consequently, Bueno de Mesquita claims that democratic leaders are often forced to engage in the more public and thus undiscriminating counterterror strategies. Even if these steps could be provocative, the governments many times need to visibly prove to their domestic audience that they are taking sufficient actions against the terrorists. Nevertheless, the ideal response to a provocation strategy would be a discriminating attack that causes as little collateral damage as possible.

SPOILING

A spoiling strategy is usually addressed at preventing the enemy from reaching a peaceful settlement with a moderate faction on the terrorists' side, making their negotiations unsuccessful. This strategy is often implemented when a likely peace agreement threatens the terrorists' more far-reaching goal. We consider the target of spoiling to be the enemy in the sense that the goal is to persuade it not to trust that the moderates on the terrorists' side will abide the peace deal. Indeed, the possibility of settling an agreement in these cases always makes the two parties doubtful that the terms will be respected. A spoiling strategy is more successful when the moderate faction on terrorists' side seems stronger and therefore more able to stop terrorism acts: in this case a terrorist attack convinces the enemy that moderates are not so powerful to suppress their own extremists. For instance, Israelis frequently questioned whether Yasser Arafat was simply not able to end terrorist attacks against Israel or did not want to do so. The Israeli-Palestinian conflict, and in particular the Oslo peace process, was prevented from settling peaceful agreements because of the often spoilers that usually coincided with violent attacks by Hamas. These acts were effective in increasing the mistrust between the two parties.

OUTBIDDING

The emergence of outbidding is frequent whenever two parties of a group (usually, a more extreme versus a moderate one) are competing to gain the support of a population not sure of which one best represents their interests. The competition between Hamas and Al-Fatah to obtain the Palestinian population's support in the negotiation with Israel is the classic example of this situation. This strategy will be implemented in our model, which will describe

how outbidding can be most effective in an electoral competition between two parties, with citizens uncertain of which one to choose.

Usually, the most extreme party's political program aims at obtaining a really high outcome but with a certain degree of risk, while the moderates seek a compromise with the enemy, reducing the struggle but also the final outcome. The extremist group may want to advertise its type and that its only purpose is reaching its ultimate goal without compromises: a terrorist attack could help signaling this to the domestic audience. We can list some examples where groups have incentives in being seen as more "extreme" by citizens:

- in bargaining contexts, it is more advantageous to be represented by an agent who is more hard-line, because he is more likely to obtain a better compromise with the enemy and to refuse inferior deals: this is the reason why many Palestinians preferred to support Hamas in the negotiations with the Israeli government;
- if citizens believe that a conflict with their adversary is inevitable, having a tougher party representing them usually increases the expected chances of winning this conflict;
- citizens know that being put in charge of governing could increase the probability of according with the enemy on unfavorable terms: signaling to be on more extreme positions demonstrates a greater commitment to the cause and thus a lower chance of "giving in" to the enemy once in charge.

Outbidding is more likely to arise when there are multiple groups competing for the allegiance of a homogeneous demographic base of support. It is interesting to note that in this strategy the effects that a possible violent attack has on the enemy is not so important for the terrorists since the main target of influence is the domestic audience.

2.c Goals of extremists

In addition, looking at the usual ultimate goals of extremists, we can gather them in five main categories that have had more importance during these last decades: regime change, territorial change, policy change, social control, and status quo maintenance. **Regime change** is clearly the overthrow or replacement of the government in charge with one closer to the terrorists'

needs or even led by them. This has been the final goal of many Marxists groups such as Sendero Luminoso (Shining Path) in Peru. Besides, territorial change means taking a territory away from a state either with the intention to establish a new state (as the Tamil Tigers tried to do in Tamil areas of Sri Lanka) or to join another state (the goal of Lashkar-e Tayyiba, who are seeking to incorporate Indian Kashmir into Pakistan). A wider category is policy change: here we could include Al Qaeda's object to make USA drop their support for Israel and corrupt Arab regimes such as Saudi Arabia. Furthermore, we have social control that constrains the behavior of individuals, rather than the state. We can find an example of an organization seeking social control in the United States looking at groups such as Ku Klux Klan, which is pursuing the continued oppression of African Americans after the Civil War. Finally, status quo maintenance means bolstering an existing regime or a territorial arrangement against political groups that seek to change it. Many Latin-American right-wing paramilitary organizations, for instance the United Self-Defence Force of Colombia, have chased this goal but also protestant paramilitary groups in Northern Ireland defended the maintenance of the territorial status quo (Northern Ireland as British territory) against IRA's demand that the territory was transferred to Ireland.

Let's sum up these goals with the help of Figure 3 below: here we list the range of possible goals with their respective frequency and the terrorist organizations that pursued them.

Figure 3 –	Main	terrorist	organizations	and their	ultimate goals
a					

Name	Ultimate Goals	RC	тс	PC	SC	SOM
Abu Nidal Organization	Destroy Israel; establish Palestinian state	х	х			
Abu Sayyaf Group	Secede from Philippines		x			
Al-Aqsa Martyrs' Brigade	Destroy Israel; establish Palestinian state	x	x			
Ansar al-Islam	Evict United States from Iraq; establish Islamic state	x		х		
Armed Islamic Group	Establish Islamic state in Algeria	x				
Asbat al-Ansar	Establish Islamic state in Lebanon	x				
Aum Shinrikyo	Seize power in Japan; hasten the Apocalypse	x				
Basque Fatherland and Liberty (ETA)	Secede from Spain		x			
Communist Party of the Philippines/New People's Army	Establish Communist state in Philippines	х				
Continuity Irish Republican Army	Evict Britain from Northern Ireland; unite with Eire		x			
Al-Gama'a al-Islamiyya (Islamic Group)	Establish Islamic state in Egypt	×				
Hamas (Islamic Resistance Movement)	Destroy Israel; establish Palestinian Islamic state	x	x			
Harakat ul-Mujahidin	Evict India from Kashmir; unite with Pakistan		x			
Hezbollah (Party of God)	Originally: evict Israel from Lebanon; now: destroy	х	х			
	Israel and establish Palestinian Islamic state					
Islamic Jihad Group	Establish Islamic state in Uzbekistan; reduce U.S. influence	х		х		
Islamic Movement of Uzbekistan	Establish Islamic state in Uzbekistan	x				
Jaish-e-Mohammed (Army of Mohammed)	Evict India from Kashmir; unite with Pakistan		x			
Jemaah Islamiya	Establish Islamic state in Indonesia	х				
Al-Jihad (Egyptian Islamic Jihad)	Establish Islamic state in Egypt	х				
Kahane Chai (Kach)	Expand Israel		х			
Kongra-Gel (formerly Kurdistan Workers' Party)	Secede from Turkey		x			
Lashkar-e Tayyiba (Army of the Righteous)	Evict India from Kashmir; unite with Pakistan		x			
Lashkar i Jhangvi	Establish Islamic state in Pakistan	x				
Liberation Tigers of Tamil Eelam	Secede from Sri Lanka		x			
Libyan Islamic Fighting Group	Establish Islamic state in Libya	x				
Moroccan Islamic Combatant Group	Establish Islamic state in Morocco	x				
Mujahedin-e Khalq Organization	Overthrow Iranian government	x				
National Liberation Army	Establish Marxist government in Colombia	x				
Palestine Liberation Front	Destroy Israel; establish Palestinian state	x	x			
Palestinian Islamic Jihad	Destroy Israel; establish Palestinian state	х	x			
Name	Ultimate Goals	RC	тс	PC	SC	SCM
Popular Front for the Liberation of Palastine	Destroy lerael: establish Palestinian state	x	x			
Popular Front for the Liberation of Palestine General Command	Destroy Israel; establish Palestinian state	Ŷ	ŝ			
Al-Qaida	Establish Islamic states in Middle East; destroy Israel; reduce U.S. influence	х	х	х		
Al-Qaida in Iraq (Zarqawi group) Real Irish Republican Army	Evict United States from Iraq; establish Islamic state Evict Britain from Northern Ireland; unite with Eire	х	x	х		
Revolutionary Armed Forces of Colombia	Establish Marxist state in Colombia	x				
Revolutionary Nuclei (formerly Revolutionary People's Struggle)	Establish Marxist state in Greece	x				
Revolutionary Organization 7 November	Establish Marxist state in Greece	x				
nevolutionary organization / November		0				

Salafist Group for Call and Combat Shining Path (Sendero Luminoso) United Self-Defense Forces of Colombia	Establish Islamic state in Algeria Establish Marxist state in Peru Preserve Colombian state	X X	10		0	X
Total		31	19	4	0	1

SOURCE: Office of Counterterrorism, U.S. Department of State, "Foreign Terrorist Organizations," fact sheet, October 11, 2005. NOTE: RC: regime change; TC: territorial change; PC: policy change; SC: social control; and SQM: status quo maintenance. Coding of goals is the authors'.

As we can see, regime change is the most common goal, also because it is the most generic one and may have a wide variety of aspects.

3. CORRUPTION

Delineating corruption looks simpler than defining extremism but actually it is not: it can be tricky to mark the border between acceptable gifts and non-acceptable bribes, between useful networking and harmful nepotism. This border is again strongly dependent on the cultural features of a society, that usually give the base to outline what can be acceptable or not. Therefore, the definition we are looking for must be somehow culturally-flexible, given the differences that we mentioned in terms of cultures but also in terms of legal systems. Transparency International (the global coalition against corruption) defines corruption as "the abuse of entrusted power for private gain" with three categories (grand, petty and political) depending on the amount of money lost and the sector where it occurs. Corruption may be divided between:

- Grand corruption, which is implemented at top government's levels to distort policies or the central functioning of the state, allowing leaders to thrive at the expenses of the public good.
- **Petty corruption**, that refers to low- and mid-level public officials abusing of their power with citizens in order to achieve some private benefit.
- **Political corruption**, identified as a "manipulation of policies, institutions and rules of procedure in the allocation of resources and financing by political decision makers, who abuse of their position to sustain their power, status and wealth".

Therefore, the private benefits that we mentioned usually coincide with the retention and improvement of political decision makers' power, status and wealth. Thus, the principal component of this definition is the public-private dimension, with a corrupt agent that defies his public entrusted responsibilities for private purposes.

Corruption can build up many complex and differentiated systems to conceal the agents involved: as we explained previously, it has necessarily to adapt to the context in order to be most effective. Now we will examine the possible aspects and vicious mechanisms put in motion by corruption. To give a first overview of the possible corrupted practices, we can take a look at the anticorruption glossary of Transparency International and list the main ways in which it is implemented:

- **Bribery** is the offering or promising of an advantage (usually a monetary fee or gift) as an inducement for actions against the law or common trust.
- Clientelism, outlined as an unequal system of exchanging resources and favors that exploits a relationship between a wealthier or more powerful 'patron' and a less wealthy and weaker 'client'.
- **Collusion**, that takes shape in a secret agreement concluded by some parties conspiring to deceive or commit fraud in order to obtain illicit financial gain. Usually parties involved are called "cartels".
- **Extortion**, named as the "act of utilizing, either directly or indirectly, one's access to a position of power or knowledge to demand unmerited cooperation or compensation as a result of coercive threats".
- **Patronage**, that regards a context in which a person is chosen for a job or a government benefit not because of his qualifications and entitlements but as a result of affiliations and personal connections.
- **Nepotism**, which involves some favoritism linked to acquaintances and familiar relationships: usually someone in an official position exploits the power and authority in his possess to guarantee some private benefit to a friend or member of the family, even if he or she is not the most qualified person for that position.

Now that we have given an overview of the main forms of corruption, let's summarize what could be its consequences. Corruption initiates several vicious mechanisms, as Rico Grimm (2009) points out. It may damage a country's economy and wellness in many distinct aspects:

- It lowers the quantity of foreign direct investments (Wei 2000).
- It increases the size of underground economy, thus weakening the available sources of taxation and government revenues (Johnson/Kaufmann/ZoidoLobaton 1998).
- It may lower environmental regulation, therefore encouraging pollution (Welsch 2004).
- It promotes economic inequality and reduces citizens' trust in the current government (Uslaner 2008).

- It slows the economic growth of a country, possibly leading to economic grievances (Mauro 1995).
- It distorts the government's investment decisions: the allocation of public resources to sectors entailing limited opportunities for corruption (for example education) is lowered in favor of high opportunity ones, such as defense or large infrastructure projects (Mauro, 1998).

Focusing in particular on this last point, we can interpret it as a relation that indirectly links corruption to extremists' recruitment. It becomes clear that if education endowment in a country is reduced, it is more likely for a youngster to join extremist movements since its employment opportunities decrease without a proper education.

From empirical evidence it is evident that corruption is path-dependent and its harmful effects on society's members are worsened in the long run, as Lambsdorff, Taube and Schramm argue (2004). The intrinsic mechanisms of corruption have a self-sustaining nature that facilitates its spread, survival and development: beginning a corrupt relationship, for example, may have high fixed costs (for instance, the expected legal penalties and spoiling of a company's reputation) but, once started, there is also a huge cost of lock-in. After setting up a corrupt system, subsequent acts of corruption will become more profitable and the possibilities of being caught red-handed decrease, as presumably the sense of guilt may decrease. Moreover, the vicious circles put in motion have the power, after a certain period, to reduce the transaction costs of the corruption: for example, a corrupted party that allocates careers and nominations only to acquaintances of its leaders will enlarge its network, reducing the possibility of being discovered and thus paying a penalty.

Of course, who is involved in corrupted activities undergoes the risk of being caught and punished on the base of the legal provisions. This risk, according to Mariano Mosquera (2013) is proportional to three factors. First of all, the probability of getting away with corruption is inversely proportional to the number of actors involved in the illicit activity, thus the bigger the network the more it is dangerous for who is involved. Furthermore, the ease of remaining in the shadow depends on the method of implementation of the corrupt relationship, which can be Influence (less costly to be invisible), Agreement or Threat (costlier to be invisible). Finally, the probability of getting caught red-handed is contingent on

the related actor: it is less complicated to involve in a corrupt network companies, more problematic with public servants or citizens.

How can we measure how much a society is corrupted? Corrupt practices are meant to remain hidden and thus difficult to quantify. The solution, if we want to scale different countries in terms of corrupted activities, is to speak of "perceived" corruption. The most popular index that economists refer to nowadays is the Corruption Perception Index, computed by Transparency International. The CPI draws on 13 different surveys and assessments from 12 different institutions: the African Development Bank, the Bertelsmann Foundation, the Economist Intelligence Unit, Freedom House, Global Insight, International Institute for Management Development, Political and Economic Risk Consultancy, The PRS Group, Inc., the World Economic Forum, the World Bank and the World Justice Project . These 13 surveys can be business people opinion surveys but also performance assessments from a group of analysts, and each country must be assessed by three or more sources to have a reliable measure on the CPI. All these surveys and assessments are translated into a score that goes from 100 (very clean country) to 0 (highly corrupt country): Figure 4 below shows the various scores in the 2016 CPI.



Figure 4 – The Corruption Perception Index in 2016 all over the world

Source: Transparency International (2016)

The countries that experienced extremism during the last 50 years all have a really low score in this index: for example, Yemen scores 14 (170° in the ranking), Nigeria 28 (136°), Somalia 10 (176°) and Afghanistan 15 (169°).

Of course, this index is a proxy and, as we said, corruption is hard to summarize in a single score, also because its nature depends on the cultural framework where it is found. The CPI is based on perceptions, thus it may be subject to the bias of who is in charge to compute it. Moreover, this index has been criticized because it aims to measure only public-sector corruption, leaving out private actors. Thus, it is important to keep in mind that this score does not give a perfect and complete overview of the corrupt practices present in a country.

4. THE LINK BETWEEN EXTREMISM AND CORRUPTION

The focus of this thesis is the relation that brings corruption to favor the arise of extremist movements and the outbreak of terrorism. In this chapter we will discuss the fundamental features of this link.

Countries characterized by elevated levels of corruption are more likely to suffer conflict. Figure 5 below shows the positive correlation between political stability (an index from World Governance Indicators) and the absence of corruption (2014 score from World Justice Project). Twelve of the fifteen lowest-ranking countries on Transparency International's 2013 Corruption Perceptions Index, for instance, experienced insurgencies, harbour extremist groups, or generated other severe threats to international security.



Figure 5 – Political stability and absence of corruption

Source: Carnegie Endowment for International Peace (2014)

When a government becomes kleptocratic, it is likely that it will lose its accountability and authority at the eyes of the citizens, who could be driven to find extreme solutions to change the status quo. Moreover, kleptocracies extinguish or prevent the emergence of institutions that can hold them accountable: the result is that corrupted actors' deeds remain unchecked and unpunished. Substantially, a kleptocracy suffocates the moderate political voices that could lead to possible alternatives to current policies and leaders. Tom Malinowski, Assistant Secretary of the State Department' Democracy, Human Rights and Labour Bureau, stated: "Success in fighting violent extremism depends in part on maintaining the trust between the government and the communities where extremists hide and seek recruits. Corruption destroys that trust and people start fearing more the authorities supposed to defend them than the extremists. And some will be susceptible to the terrorists' propaganda that promises to purify the society from this spurge".

In addition, corruption fuels a sense of alienation and anger within communities that feel powerless in front of the vicious system created by corrupted public officials. Consequently, joining an extremist group in some situations is a solution adopted by citizens not because they share the ideological fanaticism but because extremists often seem the only ones powerful and tough enough to stand against the government.

A clear example of this link is given by the extremist group Boko Haram in Nigeria: the corruption within the Nigerian government and its officials is deeply rooted, and the extremists' propaganda is funded on the idea that if the constitution was based on the Islamic system, the society would be freed from these vices. Extremists find fertile ground across Nigerian villages and can easily recruit citizens sick and tired with the repeated injustices of public officials.

Corruption many times generates grievances because it blocks the participation to the political life of a nation: if a party has a recruitment system based on nepotism and clientelism it is normal that an average citizen will feel marginalized. The political or perceived marginalization of certain categories of social groups is believed to increment the probability of violent extremism. An example is provided by the post-2003 political settlement in Iraq, that failed to involve Sunni Arabs in politics: this failure has been commonly identified as a reason of the outbreak of the 2006-07 civil conflict and the subsequent rise of ISIL (Tripp, 2007; Weiss and Hassan, 2015).

It is important to point out, however, that corruption is not a sufficient motivation for opposition groups or unsatisfied population to take extreme solutions against the government. Moreover, saying that corruption automatically increases popular grievances until a level of violent rebellion is a bit of a stretch. Indeed, corruption and political stability can coexist without much problems. Empirical evidence from many states shows that some kinds of

corruption are important in fixing political stability: buying off political opponents and extreme adverse factions may be the best thing in a perspective of national interest (Le Billon, 2003). This could be in fact the most effective tactic in a context of conflict resolution to keep or bring back peace. The idea is the following: corruption is capable to feed the greed and decrease the grievances of politically refractory groups with an enlargement of the already present clientelist network. Here, of course, it will be a key point to discuss the ideological adversity to corruption of the group, since of course the philosophy of a political party or faction could be restive to corruption. We will analyze further this aspect of contraposition between corruption and ideology in our model.



Figure 6 – Corruption-related security incidents since 2008

Source: United States Institute of Peace

As we said, underdeveloped countries have higher degrees of corruption and thus it will be more likely that this will fuel violent extremism. In Figure 6 above, we can take a glance of the frequency of corruption-related security incidents from 2008: Middle East and Center-North African countries experienced a dramatic quantity of these kinds of episodes. For instance, Yemen is one of the countries more afflicted by corruption (in the 2016 CPI it ranks within the 20 worst nations in the world), and this is believed to have fueled the impressive quantity of conflicts ant terrorist attacks in this country. During the last 50 years Yemen experienced several civil conflicts (1962, 1986, 1994 and 2004 with more than 200000 deaths) that highlighted the government's inability to hold this diverse county together. Poverty and corruption, along with the incapacity of Yemen's government to provide basic services to its citizens and to create employment, contributed to the rise of extremist groups. The threat of violent extremism is unlikely to disappear in this kind of countries without some attempt to break this vicious cycle triggered by corruption and state weakness.

4.a Empirical evidence: the case of Indonesia

Indonesia is one of the countries in which corruption among local officials is most deeply rooted, with frequent bribery and harassment of ordinary citizens. From the point of view of the population, the only possibility to change the situation is represented by political elections, when they can hope for a reshaping of the environment. Vernon Henderson and Ari Kuncoro (2011) study the correlation between a computed "bribe ratio" and the preferences of voters in terms of support to Islamic parties, starting from data of 1999, when Indonesia achieved democratization. They argue that parties labelled as Islamic may benefit from a perception of being more averse to corruption at the eyes of Indonesian voters. As a matter of fact, the main exponents of these parties in Indonesia were perceived to be more honest and less easily bribable with respect to secular parties' politicians, also because Islamic parties selected their candidates for election searching people that leaded an "Islamic way of life" (Kuran, 2004).

As we said, corruption is a practice that adapts to the socio-economic context where it emerges. In Indonesia, the most popular corrupted activity is bribery, which is very frequent between firms and public officials. Firms pay bribes to ease the process of obtaining locally-set licenses, which are required by Indonesian government, that strictly monitors this license compliance. The sample of firms collected by Henderson and Kuncoro averaged about 7 visits a year in the period 2001-2004 from public officials and inspectors checking this license requirements. In addition, firms may pay bribes also for reasons other than license compliance: for example, to decrease the time needed for license renewal or to appease a public official who may claim that a plant requires a license that is not needed. Thus, a

synthesis of the grade of corruption is this "bribe ratio" computed by Henderson and Kuncoro, a percentage of bribe asked over annual total costs by firm.

The paper examines in depth the effects of local policies on corrupt local officials who have to deal with Indonesian firms. Data about bribes are collected from surveys that asked about corruption from 2001, the year when Indonesian government was going through the decentralization process, until 2004. After fiscal decentralization, each district had full responsibility for public services, which included the license mechanism that we mentioned before. The political panorama at that time was made of a coalition of 2 long-standing secular parties, GOLKAR and PDIP, opposed to Islamic parties such as PKB and PKS. The first elections were in 1999, while the second took place in 2004: Figure 7 below plots the difference in votes between first and second elections for secular parties in relation with the 2001-2004 average bribe ratio for each district. 2707 firms are covered in the surveys, while data about vote shares cover 87 different districts.





Source: J. Vernon Henderson and Kuncoro, Corruption and local democratization in Indonesia: The role of Islamic parties (2011), Journal of Development Economics, 2011, vol. 94, issue 2

As we can see, the correlation is negative: the more corrupted had been the district during the period 2001-2004, the more the popular support for secular parties decreased turning in Islamic parties' favor. If we take only the answers from the surveys about bribes of 2004, the correlation with the change of percent votes for PDIP and GOLKAR is still negative. This is shown in Figure 8 below, which displays the correlation between the bribe ratios of 2004 and the change of percent votes for secular parties in each district.

Figure 8 – Correlation between Average Bribe Ratio in 2004 and change of percent votes for PDIP and Golkar between 2004 and 1999



Source: J. Vernon Henderson and Kuncoro, Corruption and local democratization in Indonesia: The role of Islamic parties (2011), Journal of Development Economics, 2011, vol. 94, issue 2

The data indicate that voters responded to high corruption and bribe rates by favoring the new Islamic parties, whose programs emphasized anti-corruption policies. Moreover, in districts where this kind of parties had the greater shares of votes, the bribe ratio was actually reduced way more with respect to districts with a dominance of secular parties. Of course, there could be some objections to this causal link between corruption and assembly composition. For

example, Islamic parties may have imposed policies that affected this bribe mechanism in indirect ways such as reducing the return on capital of firms with stricter capital requirements: a reduced business would mean also less firms to ask bribes. In addition, Islamic parties may have generated less bureaucracy with fewer license requirements for firms and thus less opportunities for asking bribes. To evaluate these objections, Henderson and Kuncoro perform an econometric analysis and reveal that the relationship between bribe ratio and firms' efficiency is insignificant, and also the effects of changing in regulation (with and increase or decrease of bureaucracy) to bribe ratios are not significant at all.

In Indonesia it was evident that Islamic parties had more credibility with respect to secular parties in adopting anti-corruption policies. Islamic candidates seemed to have more integrity, possibly because of strong ideological constraints.

Moving to the link between corruption and extremism, here bribery brought Indonesians to prefer Islamic parties, that were not essentially extremist in their political programs. But looking at the definition that we provided previously, we said that extremism is an attitude that implies behaviors far from ordinary. For the reasons we explained before, we could consider bribery as ordinary in Indonesia, and in the same way politicians turning a blind eye on it could be considered normal. Since Islamic parties had strong ideological roots that brought its representatives to refuse corruption and fight bribery in any form, the attitude of these parties can somehow be considered as "extremist".

Our challenge then will be to explain this empirical evidence with the help of our model: the interesting issue will be to discuss for what reasons a more ideological party would be less prone to corruption with respect to a secular party. Moreover, we will try to find a reasoning behind the mechanism that brings people to vote for extremist parties when there is a more diffused perception of corruption.

4.b A theoretical approach

There is a wide economic literature that tried to explain the reasons behind the outbreak of extremist movements through rational choice models. We will examine the most interesting ones and the most useful with an eye on our model.

Bruckner and Gruner (2010) investigate the impact of economic growth on the support for extremist political parties. They observe that these kinds of movements often offer to individuals higher benefits in the short run but likely losses in the long run, due to an

increased income uncertainty. Their model analyses the impact of several variables of interest on the support for extremist policy platforms:

- Growth rate, linked to a higher cost of future income risk and thus reducing the number of supporters of extreme policies;
- The **discount factor** used to discount voters' payoffs, directly proportioned to support to moderate parties;
- Economic inequality, which raises the support for redistribution policies promoted by extremists and might also influence economic growth changes.

The paper concludes underlining the negative effect of the GDP per capita growth on the support for extremist movements across all the OECD countries analyzed. Its interpretation is the following: since moderates in most occasions foster the maintenance of the status quo, an optimist perception by citizens on GDP growth would then promote moderates' political programs.

Ethan Bueno de Mesquita built more than one model to portray contexts of domestic terrorism, civil wars and citizens facing a choice between supporting the incumbent government or an opposed faction. In "The Propaganda of the Deed: Terrorism, Counterterrorism, and Mobilization" (2007) he depicts a situation in which an extremist faction is considering the option of making a terrorist attack against the government. This attack would be aimed exclusively at provoking an undiscriminating response of counterterrorism that would radicalize the population and thus increment its support to the extremist organization. This is the terrorist strategy of provocation that we mentioned previously in the chapter "Main strategies of extremists". Mesquita discusses again how counterterrorism policies may influence the beliefs of the population in "Politics and the Suboptimal Provision of Counterterror" (2005), in which a government has to decide how to allocate a fixed budget for counterterror strategies. The conclusion is that the government is forced to allocate an amount of resources larger than the optimal quantity to the strategies more observable to the public, since in this way it increases the probability of being reelected. There is a kind of moral hazard problem, with the government overinvesting in publicly visible strategies: to overcome this issue the author suggests providing the citizens with a mechanism able to monitor the unobservable strategies, which would though be difficult to implement since those strategies are usually deemed to remain secret. Another

fascinating model that Mesquita has elaborated is theorized in "Regime Change and Revolutionary Entrepreneurs" (2010). Also in this case an extremist party has the possibility to use terrorism but with the goal of sending a message to the population. In this model the observed violence of a terrorist attack is also a function of the "anti-government sentiment" within the population, therefore when citizens observe an attack they infer what might be this average sentiment level. Having thus a belief of what other citizens think and will do, a person will decide whether to join the extremist or not in a conflict against the incumbent regime. If the extremist group manages to convince the citizens that there is a diffuse antigovernment sentiment, the mass will mobilize against the government. In this case the most intriguing aspect is that terrorism is used as a tool not to signal the characteristics of the extremist group (such as strength, resolve, ideology) but to reveal the orientation of the population towards the government. Mesquita argues that if an attack is more violent than expected, citizens will conclude that there has been a part of the population helping terrorists, and this part is therefore ready to mobilize against the government. This use of terrorism as a signaling tool in the hands of extremists will be discussed later on in our model.

Wintrobe (2006) presents another model aimed at interpreting the choices of an extremist group. Here extremists must decide whether to adopt extreme methods or not to reach their ultimate goals: these kinds of methods (terrorism, violence...) implicate a riskier but potentially higher payoff. On the other side, they can resort to moderate actions like voting and doing lawful demonstrations that guarantee a fixed and more secure payoff.

What determines this choice? Wintrobe argues that the critical value is the ratio of the gains from successful terrorist pressure to moderate pressure, that gives a dimension of how increased would be the returns from being more "extreme" with respect to having a moderate approach. This ratio, in turn, depends on the structure of opportunities and on the indivisibility of the ultimate goals of the group. The less the goals are divisible, the larger will be the ratio mentioned before and the more likely extremist methods will be chosen. Of course, there are other factors that influence this choice, such as likelihood that the violent methods will succeed or the potential sanctions that the group will bear if it is caught. The conclusion of the paper, finally, is that extremists with divisible objects - such as more income inequality, cleaner environment, fewer abortions, fewer control on guns – will not adopt violent solutions, while if the goals are more indivisible – for instance the adoption of Shari 'a or the independence of a certain region - more extreme methods are likely to be used. The author

suggests an interesting policy to prevent the adoption of extreme methods: making the indivisible divisible. If the government manages to "unbundle" the ultimate goals of extremists, then there may be ways to satisfy the leaders of the extremist groups and to prevent them from choosing violence. Features like federalism, division of powers, checks and balances, proportional representation, etc. all guarantee to groups some influence on political decisions without giving them what they thought was an indivisible goal.

P. Collier and A. Hoeffler (1998) give another interesting view about what influences rebels' choices and what factors contribute to create the opportunity for conflict. They temporarily abandon the discussion about terrorism in favor of an analysis about when it is advantageous for a certain group (rebels) to start a conflict or not. In the model presented, the utility of rebels from engaging in a hypothetical civil war is dependent on various variables:

- **Probability of victory**, which is in turn negatively influenced by military expenditures from the government (a proxy of this measure might be the taxable base of the country).
- The capacity of a future rebel government to reward its supporters, in turn dependent upon the potential revenues of the government and hence upon the taxable base. Thus, the taxable base has an ambiguous effect on the incentive for rebellion, both raising and decreasing its potential utility.
- The **size of the population**, considered as a proxy of the geographic and cultural fractionalization within a country, which increases the chances of a civil conflict.
- **Cost of rebellion**, linked to the expected duration of the conflict and the per capita income of the population (that can also be considered as a cost opportunity of who decides to rebel).

The resulting rebels' utility function is therefore a difference between the expected gains and the expected costs from a conflict, as we can see in Figure 9 below.

Figure 9 – Utility function from engaging in a conflict in the Collier-Hoeffler model

$$U_{w} = \int_{t=D}^{\infty} \frac{p(T) \bullet G(T, P)}{(1+r)^{t}} dt - \int_{t=0}^{t=D} \frac{(f(Y)+C)}{(1+r)^{t}} dt$$

where p = the probability of rebel victory

T = the taxable capacity of the economy

G = gain conditional upon victory

P = the size of the population

D = expected duration of warfare

Y = per capita income

C = coordination costs

r = the discount rate

Source: Collier P. and Hoeffler A., "On Economic Causes of Civil War" (1998), Oxford Economic Papers Vol. 50

For any potential rebel, there is a maximum expected duration of warfare that determines the threshold above which rebellion is the best strategy to adopt. The paper focuses then on this expected duration value of the warfare and analyzes what factors may influence it. Therefore, one of the conclusions reached by Collier and Hoeffler is that if rebels have perfect foresight, so that the expected duration coincides with the actual duration, the observed duration of civil wars will be:

- an increasing function of the probability of rebels' victory times the taxable capacity of the economy.
- An increasing function of the size of the population.
- A decreasing function of per capita income and of coordination costs for rebels.

J. Fearon (2007) as well describes the variables influencing the risks of civil war with the help of a rational choice model. He proposes a framework where rebels and government are the only two players and describes their process of recruitment of new rebels or soldiers. One of the first findings is that the poorest fractions of society will sign up on one of these two sides, while the other citizens will keep on working in the normal economy. But the main conclusion that Fearon's paper reaches is the empirical association between higher incomes and lower civil war risks. The interpretation is the following: richer countries are often associated with natural terrains not suitable for guerrilla practices (for instance, hiding) and with more efficient capability of state military corps to conduct counterinsurgency. Therefore, a higher income country makes it more difficult for rebels to succeed and recruit new people. David Mason (1996) theorizes instead a model where the government and a rebel opposition compete to gain the support of the population by providing them goods and services or by threatening them with sanctions. Then, the representative peasant can choose his level of support to rebels' activities, from the least supportive strategy (betraying them and providing information to the government) to the most supportive with an active and overt support. The conclusion of the paper is that "nonelites", or in other words ordinary citizens, base their concerns more on economic survival and avoidance of violence than on the abstract ideological doctrines of the two factions. In addition, Mason argues that the accommodative counterinsurgency strategies are more effective in shifting popular support towards government than the coercive strategies. In fact, if the government's counterinsurgency strategies entail an indiscriminate use of violence, the population could seek the protection of the rebels, without considering ideological matters.

Many authors who attempted to depict extremists' behavior had to deal with the issue of describing terrorism in a rational way. Apart from the various strategies that we depicted before, what might be the ratio, for instance, of committing suicide in an optic of personal payoff? To assume that each player behaves rationally is fundamental in every game theoretic model, but it seems contradictory for terrorists, thinking for example of suicide bombers. Caplan (2006) presents a detailed paper about how terrorism and rationality can meet each other. He categorized terrorists in three groups: **sympathizers**, who support terrorism but in a passive way; **active terrorists**, who are part of a terrorist organization; and **suicidal terrorists**, the most extreme category of followers who decide to give away their life for the cause. Then the author describes what meanings are commonly given by economists to "rationality", since so far a univocal interpretation has still not been reached. There are three main definitions of being "rational":

- "having a negatively-sloped demand curve," or, to put it more generally, responsiveness to incentives.
- Narrow selfishness.
- Having rational expectations.

Figure 10 summarizes how the various categories of terrorist can fit in rational choice models. While sympathizers meet all the definitions of rationality, the challenge for rational choice is finding a way to adapt the behavior of active terrorists and especially suicidal terrorists with narrow self-interest and rational expectations. Finally, the conclusion of the paper is that terrorists can be considered way closer to "homo economicus" than how it would initially seem.

	Responsive to incentives	Narrow self-interest	Rational expectations
Sympathizers	Yes	Close	Close
Active terrorists	Yes	Probably close	Probably close
Suicidal terrorists	Yes	Probably not close	Probably not close

Figure 10 – Categories of terrorists and rationality

Source: Caplan, Bryan. 2006. "Terrorism: The Relevance of the Rational Choice Model." *Public Choice* 128.1/2 (July)

Another possible rational explanation of terrorism is offered by Azam (2005). In his model, the author links the current generation's payoff to the next one's, as it is common in dynastic family models. The argumentation is that individuals decide to become suicide bombers because doing so increases the probability of the next generation to receive some public good. Azam aims at explaining the empirical findings of Krueger and Maleckova (2002), for which suicide bombers from the Hezbollah came disproportionately from wealthy families and had an above average education level. Azam adds another plausible explanation to this finding: an increased educational level is believed not only to raise the opportunity cost of committing suicide, but also to make individuals more altruistic towards future generations' welfare. Thus, if this second effect is prevalent, the choice of becoming a suicide bomber assumes more rational connotations and can even be interpreted as an altruistic decision.

Arce and Sandler (2009) discuss the idea of terrorist attacks as a way of costly sending a message to the population, in a model where after an attack the government must decide how to respond to extremists. As in Mesquita (2007), they claim that terrorists often hope to provoke a heavy-handed counterterrorism response by the government that will radicalize further the population (the so-called backlash effect), but on the other hand a violent terrorist attack could undermine their already present grass-roots base of popular support (erosion effect). Thus, terrorists know that they might be exchanging this "backlash" support for the grass-roots one when they conduct an attack, and they hope that this trade off will be positive. Besides, the government must choose whether to give concessions to extremists or to respond

harshly: this decision is based not only on the expected effects on the population, but also on the information revealed by terrorists with their attack (the kind of attack modifies the government's beliefs about its opponents' features). The conclusion is that counterterrorism policy and intelligence should appropriately account for the net effects of backlash and erosion within the population.

Kydd and Walter (2002) build another model of bargaining between government, moderates and extremists, applying it to the Israeli-Palestinian conflict. The negotiation described in their model has on one side the moderates and on the other the government, which ignores the strength of the moderates and their trustworthiness. The moderate group can signal its

type by taking visible actions against the extremist faction on their side, such as bringing its exponents to justice. If though a terrorist act happens, the government could interpret it as a signal of the weakness or of the scarce reliability of the moderates, ruining in this manner the trust relationship that they were trying to build. In the Israeli-Palestinian context, Kydd and Walter argue that it was so hard to reach a peaceful solution between the moderate Palestinian Authority and the Israeli government also because Hamas (the extremist faction) kept destroying their improved relationships with terrorist attacks. They conclude that for a conclusive peaceful settlement it would be necessary for the expected payoff of both sides (Palestine and Israel) to be higher. In addition, they suggest the Israeli government to be more merciful in front of terrorist attacks and to avoid heavy responses, to finally reach peace in Palestine. In Figure 11 the frequency of suicide attacks by Hamas between 2000 and 2007 is displayed: this was one of the deadliest periods of the Israeli-Palestinian conflict.



Figure 11 – List of suicide terrorist attacks by Hamas between 2000 and 2007

Source: http://www.mepc.org/hamas-agenda-how-has-it-changed

5. THE OUTBIDDING BETWEEN PALESTINIAN FACTIONS

As we extensively discussed in the chapter "Main Strategies and Goals of Extremism", terrorism may be used in order to send a message to the domestic audience. In this chapter we will analyze further the strategy of outbidding between different factions in the context of the Israeli-Palestinian war. Mia Bloom (2004) wrote a detailed paper about how the conflict evolved during the period of the first 2000s, analysing the reasons behind the extensive use of bombing and suicide terrorism by the Palestinian factions. Her main argumentation is that in those years terrorism served at the same time to weaken Israel and to legitimate the outlier organizations which competed with the Palestinian Authority for the leadership of the community. Since in that period polls revealed that Palestinians' support for Palestinian Authority was decreasing in favour of a mounting approval for suicide bombing, violence was an effective strategy to increase a militant group's prestige and popularity. Surveys conducted among Palestinians in the first 2000s seem to confirm this thesis: Figure 12 below shows the percentages of Palestinians that supported suicide bombings in the period 1997-2003. The peak of support was reached in September 2001, with 85% of Palestinians approving this kind of operations.



Figure 12 – Support for Suicide Operations Among Palestinians

Sources: JMCC polls April 1997–October 2003. Note: Months not present on the graph indicate that this question was not asked by the JMCC or that polls were not conducted because of the Israeli policy of closures, which hindered the JMCC's ability to conduct the research on a quarterly basis. It must be pointed out that these suicide bombings had a mix of different goals: conventional explanations of terrorism attacks employed by Palestinians, for instance, describe them as aimed at slowing the improved peace relationships with Israel. This is the "spoiling" strategy discussed before: as a matter of fact, Hamas' violence increased whenever the relationships between Israel and the Palestinian Authority were improving. Moreover, these attacks may have been part of an attrition strategy of the militant groups finalized at persuading Israel that they had enough power and resolve to cause massive damages. In addition, there is the retaliatory component that played a big part, given the over 60 years of Israel's military occupation in Palestine with several provocative episodes by Israelis, such as the Hebron Massacre by Baruch Goldstein in 1994.

However, these other interpretations do not explain why the domestic audience's support for suicide operations varied so much in the early 2000s. The main reason behind this variance was that the extremist groups exploited the Palestinians' disillusionment with Arafat (president of the Palestinian Authority in charge to negotiate the peace treaties with Israel) and with the deadlocked peace process to gain share in the political market through terrorism.

A collateral effect that contributed to the increase in public support for bombings was Israel's initial heavy-handed response to terrorism, with many civilian casualties, that in some way legitimated the violence employed by Hamas and by the other extremist groups.

In the period after November 2000 the support for suicide bombings reached elevated peaks, therefore groups that perpetrated martyrdom attacks saw their popularity increasing.

The popular support for suicide operations was quite low during the period 1997-1999, when many Palestinians had faith in the peace process initiated by the Oslo Accords (signed in 1993 and 1995). In 1999 Hamas' support experienced its lowest point ever (below 12%), indicating that Palestinians believed in a peaceful resolution of the conflict. The atmosphere rapidly changed in 2000: there was a strong increase in Palestinians' unemployment and a general economic stagnation that grew popular dissatisfaction with the way the peace process was being implemented, turning in favor to suicide bombings. The reputation of Palestinian Authority's leaders was being spoiled by corruption scandals and by their incapacity to improve the daily lives of Palestinians. Consequently, Hamas focused its efforts on spectacular martyrdom operations, to signal to Palestinians its resolve to change the situation and thus gaining the support that the weakened Palestinian Authority was losing. After a series of bombings in the beginning of 2000, Hamas saw its share of popularity in public opinion polls peaking over 70 per cent. Tired and frustrated by the deadlocked peace process, many Palestinians viewed violence as the only way to reach independence and radical Islamic groups like Hamas were sponsoring this solution. Arafat's moderate approach was not supported anymore given that he had demonstrated to be incapable of fulfilling the promises made to Palestinians, and his legitimacy was being undermined by the suicide bombings. In Figure 13 below we can see how the faith of Palestinians in the peace process initiated by the Oslo agreements declined after the initial optimism.



Figure 13 – Support for Oslo Agreements Among Palestinians

Source: JMCC polls January 1994 – December 2002

Moreover, the leader of ANP did not manage to maintain monopoly over the legitimate use of force in the emerging Palestinian state entity: this vacuum created made diverse groups competing and outbidding each other with an impressive series of striking bombing attacks. Above from exploiting the weakness of ANP and increasing their political support, suicide bombings allowed these organizations to gain international prestige and foreign financial aids to keep on fighting Israel. In addition, during 2001 and 2002 most of the polls revealed that there was an average 30 per cent of Palestinians who did not trust any of the current leaders, leaving a hole in the political field over which the new groups could compete.

Credibility was acquired through these continuous attacks, and many Palestinian groups

rushed forward to claim responsibility for them as soon as they had happened. Violence had become a way to signal that the group's ideology was strong and powerful enough to do what ANP and OLP had not been able to accomplish during the previous years. A significant example of how effective suicide bombing was in bending popular favor during that period was provided by PFLP (Popular Front for the Liberation of Palestine), a political group that during 2000 was lagging significantly in the polls. In 2001 the PFLP started to use suicide bombings and created a separate wing, called Abu Ali Mustafa Brigades, devoted exclusively to these kinds of operations. After a couple of years when the Brigades conducted 3 per cent of all bombing attacks, the PFLP saw its popularity restored and the polls of October 2001 indicated that its support was increased at 4.3 per cent, more than double of the 2 per cent of one year before. Suicide attacks were also a way to appear, or re-appear in the political radar.

Above from giving credibility to the belonging group, sacrifice was also a source of honor for many Palestinians, that could guarantee an improved social status. In addition, becoming a suicide bomber even generated financial aid to the family of the bomber. Hamas invested many funds in its charitable association, that was created to pay fines and to assist the families of who committed suicide or was arrested for the cause. Hamas gained popularity also because it was founding hospitals, paying for medical care and prenatal care within the Territories; besides, many social services not guaranteed by the Palestinian Authority were instead provided by Hamas. Its fund was paying \$10000-\$25000 for each martyr, giving therefore a kind of institutionalization to suicide bombing. Given all these initiatives Hamas rapidly increased its prestige and support among all Palestinians at the expenses of the Palestinian Authority and of other groups like Al Fatah (which was controlling the Palestinian Authority).

To conclude, these attacks were effective at undermining the legitimacy of the Palestinian Authority and subverting Arafat's leadership, who disappointed many Palestinians. During the early 2000s there was a political vacuum in Palestine, with many groups trying to fill it and to convince the domestic audience that the violence was the only feasible way to solve the Israeli-Palestinian conflict.

Moving to the links to our model, it will be one of the topic to analyze this use of terrorist violence by a political group to outbid another one. As we previously pointed out, one of the main ideas that we will discuss is that terrorism is a device useful to signal to the domestic audience that the group has deeply-rooted ideological values. We will discuss this power of

terrorism to be a signaling instrument to influence the beliefs of the population, investigating which could be the situation where a terrorist attack is more advantageous in a context of electoral competition. In addition, we will look for a link between the effectiveness of terrorism and the perception of corruption among the population. A survey conducted in May 2002 from Palestinian Centre for Policy and Survey Research revealed that 85% of Palestinians believed that there was a diffused corruption in the Palestinian Authority's institutions. This was definitely another element that contributed to undermine the position of Arafat and to create this lack of faith in the peace process among Palestinians.

6. A NEW MODEL THAT LINKS CORRUPTION TO EXTREMISM

Let's now introduce the core of this thesis: a new model aimed at rationalizing the relationship between corruption and extremism.

Our goal is to study the effects of corruption on extremism and to explain how terrorism influences public opinion. Consider two parties competing to gain the political support of the citizens. The party chosen by citizens through elections will have to represent them in the negotiations with a hostile government on how to split an uncertain amount of resources. The two parties are differentiated by a variable v representing their level of ideology, with a higher v standing for a more radicalized group. We will describe three different settings, starting from a benchmark one in Section 6.a without corruption or terrorism, then in Section 6.b we will add the possibility of bribery between the government and the citizens' representative and finally we will introduce the use of terrorism as a signaling device in 6.c. But let's start with the description of the timing of the game and after we will move to a more detailed depiction of the players' utility function.

The timing of the game is the following:

1) Citizens observe the ideology of the two parties and vote which one has to represent them;

2) The winner party is revealed;

3) Nature determines the amount of resources available to the government for negotiations;

4) Government makes its bid to the chosen party to settle a peaceful deal;

5) The party decides whether to accept the bid or refuse and engage in a conflict against the government.

It is a model of electoral competition: after the elections there will be the bargaining between the party chosen and the government, seen as an enemy by the population. For instance, we can think of the Palestinian population voting to elect a representative who has to negotiate with the Israeli government, or, more recent example, the Catalan secessionists who choose a local government that has to bargain with the central Spanish government. Now our duty is to characterize further the players, with their possible payoffs. First, let's describe the variables that will influence their choices. After the elections, nature will determine a finite amount of resources R available to the government to bargain: this amount could be either high R_H or low R_L , with $R_H > R_L$. Initially the resources are still to be determined but citizens are aware that the probability that R will be high is π with $0 < \pi < 1$. Consequently, the assumed probability that R will be low is $1-\pi$. Starting a conflict has a finite and given cost $C_g>0$ that we assume to be known by all the players. Everyone knows that this hypothetical conflict will be won by the government with probability p, given 0 . Moreover, if the party wins the conflict it will gain political power and the resources <math>R available to the deposed government. We assume that each party's pay-off from winning the conflict is a sum of R and v, meaning that a party obtaining political control will benefit also from implementing its ideology (in the case of an Islamic party this could be interpreted as the imposition of Shari 'a).

Let's describe the four players with their expected payoffs:

- 1. The moderate party is characterized by a low level of ideology v_M . Its expected payoff from starting a conflict is $(1-p)(R+v_M) - C_g$, while the payoff from accepting the deal depends on the offer of the government (we will formalize it soon). On the other hand, the expected payoff from losing elections and not being the representative party is null.
- 2. The extremist party has higher ideological roots $v_E > v_M$ and its expected payoff from starting a conflict is thus $(1-p)(R+v_E) - C_g$. Concluding the negotiations ensures a payoff that again depends on how much the government can offer. As for the moderate party, the expected payoff from not being the representative party is zero.
- 3. We have a representative citizen that must choose which party to vote for. We assume that there is no heterogeneity within the population, therefore every other citizen will make the same choices of this representative one. As we said, this citizen chooses which party must represent him in the negotiations with the hostile government: if the party accepts the government's bid, the citizen will receive the whole amount of the offer. Besides, if the party refuses and starts a conflict, the expected payoff of the citizen is $(1-p)(R) C_g$. As in Mason's model (1996), here citizens care only about the material pay-off: they are informed about the ideological difference between the

parties and try to predict how they could benefit from it when the negotiations will take place.

4. The government bargains with the winner party and in the negotiations offers a portion I- α of the resources owned, with $0 < \alpha < 1$. Thus, the remaining part αR of the resources composes the payoff of the government in case that the offer is accepted. In case that the offer is refused and there is conflict, the expected payoff of the government is $pR - C_g$. We are thus assuming that the costs of conflict C_g are the same both for the party and the government. Furthermore, we assume that the government always prefers to avoid the conflict because in any state of nature its probability to win it is not sufficiently high to make $pR - C_g > \alpha R$ even with the lower offer α =0. In other words, we have that $R < C_g/p$ both in case that $R = R_H$ and $R = R_L$. We assume that all the variables characterizing the parties are known by the government. Therefore, in equilibrium the government will offer the minimal quantity necessary to make the party indifferent between accepting the deal and starting a conflict:

$$(1-\alpha)R \equiv (1-p)(R+v) - C_g$$

In this context α is the control variable used by the government to make the offer match (1-p)(R+v) - Cg, that differs between the two parties since v is different. The optimization problem from the point of view of the government is the following one: $max_{\alpha} \alpha R$

subject to $(1 - \alpha)R \ge (1-p)(R+v) - C_g$ $0 < \alpha < 1$

We will thus have

$$\alpha^* = p - \frac{(1-p)v - C_G}{R} \quad (1)$$

Note that we are making the assumption of complete information: every player knows every variable or has a rational expectation of what could be its future value. This assumption is relevant for example in the dynamics of negotiations: the party elected will observe the true realization of R and the government cannot lie about it to pocket a portion of resources. On the other hand, the government can observe the true type of the party it has to deal with and thus can avoid overbidding.

Let's now start from a basic benchmark case without corruption or terrorism and see what is the trade-off that the representative citizen has to face in the elections.

6.a Benchmark case: no corruption/terrorism

In this first benchmark framework we suppose that the government and the party are not corrupted and none of the two parties has the possibility to make any kind of terrorist attack.

We have that in the situation where $R = R_H$, the government will offer $(1 - \alpha) R_H \equiv (1-p) (R_H + v) - Cg$ and we assume that both parties will accept the deal, avoiding the conflict. Consequently, if moderates win the elections they will accept a bid of $(1-p)(R_H + v_M) - Cg$, while in case that the extremists are the representative party they will accept an amount equal to $(1-p)(R_H + v_E) - Cg$. From this assumption we can trace an upper bound for the ideological values of the two parties, that allows the deal to be always possible in the case $R=R_H$:

•
$$v_E \leq \frac{C_G + pR_H}{1 - p}$$

• $v_M \leq \frac{C_G + pR_H}{1 - p}$

In this case citizens will obtain the pay-off of the deal entirely, since the ideological values v influence just the government's bid but the parties will not implement their ideology in the society. Note that in this situation, α differs between the two bids since trying to reach a compromise with a more extreme party will make the government offer more, with a lower α . Analytically, we have that with the moderates $\alpha *_{MRH} = p - \frac{(1-p)v_M - C_G}{R_H}$, while with the extremists the government will set its offer with $\alpha *_{ERH} = p - \frac{(1-p)v_E - C_G}{R_H}$.

Let's discuss what happens in the other state of nature, that is when $R=R_L$. In this case we assume that the moderates will accept the deal whereas the extremists may engage in a conflict depending on how strong their type is. Extremists will start a war if and only if the resources R_L are too low to allow the offer $(1 - \alpha) R_L$ to reach $(1-p)(R_L+v_E) - C_g$, even with a maximum bid $(\alpha = 0)$.

In other words, in case that the moderates win the elections and $R=R_L$ we will have:

$$(1-\alpha) R_L \equiv (1-p) (R_L + v_M) - C_g$$
$$\alpha *_{MRL} = p - \frac{(1-p)v_M - C_G}{R_L}$$

On the other hand, if the extremists are the representative party, they will engage in a conflict if

$$R_L < (1-p) (R_L + v_E) - C_g$$

We can express this last condition with respect to the ideology of the party:

Proposition 1: Suppose $R=R_L$, the extremists will refuse any peaceful deal if

$$v_E > \frac{C_G + pR_L}{1-p} \equiv v_{war}$$

In the case $v_E \equiv v_{war}$, we have that the only way to avoid the conflict for the government is to offer all the resources R_L that it owns ($\alpha=0$). Besides, if $v_E < v_{war}$, the peaceful deal with the extremists will be possible also in this state of nature with $R=R_L$.

To simplify our later conclusions, we assume to be in the situation where $v_E > v_{war}$.

Let's now take a look at the choice that the representative citizen has to make: the elections happen before the negotiations and before the realization of resources, thus nobody knows the real value of R yet. The representative citizen here rationally figures out what could be his pay-off from voting a party in each possible state of nature and decides accordingly.

In case the resources are R_{H_i} he will prefer to be represented by the extremists since his payoff will be larger:

$$(1-p)(R_H + v_M) - Cg < (1-p)(R_H + v_E) - Cg.$$

This because $v_E > v_M$: we could interpret this finding by saying that usually a citizen prefers to be represented by a more hardline organization in a bargaining context because he is aware that they could fight harder to reach a favorable deal. From the point of view of an organization, this is one of the advantages of being perceived as more "ideological", as we explained in the section dedicated to outbidding. When the resources are low, the representative citizen will get an expected payoff equal to

- $(1-p)(R_L+v_M) C_g$ in case he votes for the moderates
- $(1-p)(R_L) C_g$ if he joins the extreme party, since it will start a conflict.

In this situation we have:

$$(1-p)(R_L+v_M) - C_g > (1-p)(R_L) - C_g$$

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This is because $v_M > 0$. Thus, in case $R = R_L$ the representative citizen prefers to be represented by the moderates.

Therefore, before the elections and the realization of resources, the expected pay-off of voting the moderates is

$$P_{votM} = \pi((1-p)(R_H + v_M) - Cg) + (1-\pi)((1-p)(R_L + v_M) - C_g)$$

Whereas the expected pay-off of supporting the extremists corresponds to

$$P_{votE} = \pi((1-p)(R_H + v_E) - Cg) + (1-\pi)((1-p)(R_L) - C_g)$$

It all depends on the relative probabilities of facing a high-resource or a low-resource situation, categorized by the parameter π : the more likely it is that $R=R_H$, the more incentive the representative citizen will have in joining the extremists while with a low π he will prefer to vote for the moderates.

Analytically, we have that $P_{votM} > P_{votE}$ if and only if $\pi < v_M/v_E$.

Proposition 2: In absence of corruption and terrorism, the representative citizen will prefer to vote for the moderates if $\pi < \frac{v_M}{v_E} \equiv \pi^*$.

The parameter π could be considered as a proxy of the richness of the country, in terms of natural resources for example. This is the argumentation of Ross (2006): whenever a country presents an abundance of resources, the expected payoff from engaging in a civil conflict is larger and so it is the probability of the outbreak of violence. Extremists' arguments are more influent when the population believes that there is a wide quantity of resources that extremists could possibly "steal" from the government, either in a peaceful way (through negotiations) or in a violent one. The argument of this section is standard in the literature of delegation in negotiations (Manzini, Mariotti 2003). It may be profitable to delegate a "tougher" agent to bargain with the other party.

6.b Government offers a bribe

Let's now introduce a variation on the previous framework: the government is corrupted and offers to the party's leaders that he has to face a bribe T>0. This bribe is offered with the intent to increase the portion α of resources that the government can keep for itself. It is still

in the government's interests to avoid a conflict, given that it guarantees a negative expected payoff, thus it will look for a peaceful conclusion of the negotiations. We assume that this bribe *T* has a cost $\gamma(T)$ that the government must bear. This parameter is a step function of the bribe offered:

$$\gamma(T) = \begin{cases} 0, & T \leq T^* \\ \infty, & T > T^* \end{cases}$$

We assume that the cost for the government to provide a bribe is negligible until a certain finite cutoff level T^* . If the government offers a bribe higher than this threshold, it gets "caught" and it incurs in infinite costs, which could be for example the killing of its leaders or huge sanctions from international organizations. The level of this threshold could be influenced by the transparency and the strength of the anti-corruption institutions, for example, or by the degree of independency of the media. If it is harder to get away with corruption, this T^* will be smaller, implying a higher probability to get caught.

The optimization problem of the government therefore changes to the following one:

 $max_{\alpha,T} \quad \alpha R - \gamma(T)T$ Subject to $(1 - \alpha)R + T \ge (1 - p)(R + v) - C_g$ $0 < \alpha < 1$ T > 0

Given the cost function that we showed before, we can conclude that the government will always offer T^* , since it is the maximum bribe with a zero cost or, in other words, the highest bribe that can be paid without being discovered and bearing the huge costs that we mentioned.

Furthermore, we normalize the value for the parties of each unit of T to 1 (in parties' payoff, each unit of the bribe is as much valuable as each unit of R).

In equilibrium the offer of the government will be:

$$R(1 - \alpha) + T^* \equiv (1 - p)(R + v) - C_g$$
$$\alpha^* = p - \frac{(1 - p)v - C_G - T^*}{R} \quad (2)$$

As we pointed out, offering T^* allows the government to increase the portion α of resources that it can retain for itself. Confronting (1) with (2) we can easily see that, being $T^*>0$, in the second case α^* must be higher. Consequently, the bribe gives the possibility to the government to settle the deals with lower resources offered to the party.

In addition, it is important to point out that T represents the bribe benefiting only the leaders of the party but not the citizens supporting them, who will get $(1-p)(R+v) - C_g - T^*$ in the case that the deal is settled. Therefore, citizens will be worse off now with respect to the benchmark case because the bribe decreases their payoffs. Thus, there will probably be a change in the electoral decisions, since citizens are able to forecast how parties could be corrupted and what amount they will receive consequently.

Let's discuss how the voting outcome will be modified. In equilibrium, the representative citizen makes an exact prediction of what will be the bribe in the negotiations, thus he knows the value of T^* .

The bribe T^* potentially widens the government's offer: in the benchmark case the maximum offer with $\alpha=0$ was equal to R, now the maximum offer is $R+T^*$. We again assume that both moderates and extremists will reach a deal if the government owns a high quantity of resources. From this assumption we have two new upper bounds for the ideological values:

•
$$v_E \leq \frac{C_G + T^* + pR_H}{1 - p}$$

•
$$v_M \leq \frac{C_G + T^* + pR_H}{1 - p}$$

In this state of nature we will have:

$$lpha *_{MRH2} = p - rac{(1-p)v_M - C_G - T*}{R_H}$$
 $lpha *_{ERH2} = p - rac{(1-p)v_E - C_G - T*}{R_H}$

In the case $R=R_H$, the representative citizen again expects to obtain a higher payoff from being represented by the extreme party:

$$(1-p)(R_H+v_E) - C_g - T^* > (1-p)(R_H+v_M) - C_g - T^*$$
 when $R = R_H$

The representative citizen foresees that each party will decide to settle a deal with the government and both will accept a bribe T^* in equilibrium. The government will be better-off in this case with respect to the benchmark because the portion α of resources that it can keep is higher, both in the negotiations with extremists and moderates ($\alpha^*_{MRH2} > \alpha^*_{MRH}$ and $\alpha^*_{ERH2} > \alpha^*_{ERH2}$).

The situation is trickier in the case that $R=R_{L}$, where the citizen is no more certain of which party may advantage him. The moderates will again settle a deal, and in equilibrium the government will offer a $(1-\alpha^*_B)$ portion of resources:

$$R_L(1-\alpha) + T^* \equiv (1-p)(R_L+v_M) - C_g$$

 $\alpha^*_B = p - \frac{(1-p)v_M - C_G - T^*}{R_L}$

On the other hand, we have that if $R_L+T^* < (1-p)(R_L+v_E) - C_g$, there will be no possible bribe that allows the government to reach a peaceful agreement with the extremists, who will always engage in a conflict. We can express this condition isolating v_E:

Proposition 3: if $v_E > \frac{p_{RL+T*+CG}}{1-p} \equiv v_{Conflict}$ and the extremists are the representative party, then they will pursue a conflict when $R=R_L$ and buying a peaceful deal through corruption will be impossible for the government.

Similarly to the benchmark case, we have that if $v_E \equiv v_{Conflict}$, the only way to avoid the conflict for the government is to offer all the resources R_L that it owns ($\alpha=0$) together with the bribe T^* . Moreover, if $v_E < v_{Conflict}$, the peaceful deal with the extremists will be possible also in this state of nature with $R=R_L$.

We again assume that in this situation v_E is sufficiently high to overcome the threshold $v_{Conflict}$. Note that this ideological threshold is different than in the benchmark case: we have that $v_{war} < v_{Conflict}$, given that $T^*>0$, thus in this case it will be necessary a higher ideological value v_E to cross this threshold. The first conclusion that we can trace is that corruption makes the conflict less likely since the bribe allows the government to "buy" the party with which it is dealing. This is the argumentation of Le Billon (2003): corruption might be considered as a "tool" to fix a context of political instability.

The situation we are depicting is summarized in Figure 14, that gives an overview of what may happen in the state of nature $R=R_L$. The blue line represents the minimum offer necessary to conclude a peaceful deal with the moderates in equilibrium, making them indifferent between the conflict and the deal. The obliquus lines stand for how the offer of the government varies with respect to α , both without the bribe (green line) and with it (red line). The orange line represents the minimum payoff that a group with $v = v_{Conflict}$ needs to be offered to avoid a conflict: as we can see, the deal is possible only if $\alpha=0$ and $T=T^*$. If a group is characterized by an ideology $v > v_{Conflict}$, reaching a deal will be impossible because the minimal offer that the group will require will lie in the area over $(1-p)(R_L+v_{Conflict}) - C_g$. Note that without the bribe the government reaches a deal with the moderates with $\alpha*_{MI}=\alpha*_{NB}$, while with the bribe it offers $\alpha*_B$, with $\alpha*_B > \alpha*_{NB}$. As we said, the government is better off with the possibility of corruption than without it.





From the point of view of the representative citizen, the expected pay-off from joining the extremists in war is still $(1-p)(R_L) - C_g$ given that, as we said, they do not care about ideological pay-offs. On the other hand, in equilibrium the moderates accept $(1-\alpha)R_L + T^* \equiv (1-p)(R_L + v_M) - C_g$ but the citizens expect to receive only $(1-p)(R_L + v_M) - C_g - T^*$.

Confronting the representative citizen's payoffs from voting extremists or moderates in both states of nature, we might have three different situations, depending on the threshold T^* :

- 1. If $T^* > v_E(l-p)$, in equilibrium the representative citizen will vote for the extremists whenever $\pi < \frac{T^* - v_M(1-p)}{T^* - v_E(1-p)}$. Since $v_M(1-p) < v_E(1-p)$, we have that $\frac{T^* - v_M(1-p)}{T^* - v_E(1-p)} > 1$. Given that $0 < \pi < 1$, we can see that the last condition for π is always satisfied. Therefore, we can conclude that whenever $T^* > v_E(1-p)$, in equilibrium the representative citizen will choose the extremists.
- 2. If $T^* < v_E(1-p)$, in equilibrium the representative citizen will vote for the extremists when $\pi > \frac{T^* - v_M(1-p)}{T^* - v_E(1-p)}$. Here we are close to the benchmark case: with a low degree of corruption, the citizens will prefer the extremists only if they believe that it is likely to have $R=R_H$. Note that for $T^*=0$ (bribery is impossible), the conclusion is the same of the benchmark case.
- If T*= v_E(1-p), in equilibrium the choice of the representative citizen will be to vote for the extremists, no matter the probabilities of the states of nature. Here the condition for the representative citizen to prefer the extremists would be T*> v_M(1-p), but since T*= v_E(1-p) and v_E(1-p) > v_M(1-p), this condition is always satisfied.

Summing up these three cases we have:

Proposition 4: If $T^* < v_E(1-p)$, the representative citizen will choose to be represented by the extremist party when $\pi > \frac{T^* - v_M(1-p)}{T^* - v_E(1-p)}$. On the other hand, if $T^* \ge v_E(1-p)$ the representative citizen will vote for the extremists no matter the probabilities of the different states of nature.

Let's look at a particular situation: we know that for $R=R_H$, the expected payoff of the representative citizen from voting the extremists is always larger, but what is the trade-off when $R=R_L$? Confronting the two payoffs from voting one group or another, we have that if T^* is sufficiently high to make $(1-p)(R_L+v_M) - C_g - T^* < (1-p)(R_L) - C_g$, the representative

citizen will support the extreme faction even if he knows that this will bring to a conflict. After some computations in this last situation we find a sufficient condition for the extremists to always be the winner party:

Proposition 5: If $T^* > (1-p) v_M$ the representative citizen will vote for the extremists, even if this will lead to a conflict.

Note that in this last particular case, the probabilities of the state of nature π and l- π do not matter anymore since, with a sufficiently high bribe (whenever $T^* > (l-p) v_M$), a citizen will always choose to support the extremists.

Therefore, another important conclusion that we have reached is that a certain degree of corruption will change the preferences of the population towards more ideological parties. This finding confirms the empirical evidence from Henderson and Kuncoro (2011) about the Indonesian elections, with citizens from districts more afflicted by bribery shifting their choices towards Islamic parties.

As we argued more than once in the previous chapters of the thesis, the more a social community is humiliated and drained of hope because of corruption, the more it will be sensible to extremists' arguments. Anyway, in our model the population does not choose to join the extremists because of ideological affinity but because it expects to increase its payoff: citizens believe that a hypothetical conflict will free society from all the corruption that has impoverished them so far. Therefore, the expected payoff from a conflict does not contain T since if extremists win the conflict, they will guarantee to citizens the access to the whole resources without compromising with anyone or keeping any "slice of the cake" only for themselves.

6.c Terrorism as a signaling device

So far, we have not introduced the possibility for the parties to utilize terrorism in order to send a message to the citizens. In this section we develop the following idea: a party has the power to communicate information to the domestic audience through terrorism, which is hence used as a signaling device. The interpretation of the usage of terrorism in this manner is similar to Mesquita (2010), but while in his model the goal was to tell information about the

characteristics of the population, here the aim is to communicate the ideology of the organization.

In this new framework we make some changes to the starting context: first of all, citizens have information only about the ideology of the moderate party, while they are uncertain about the other party. We have that the type of this other group is unknown to the public since it is a "new entrant" in the political panorama. Let's look at the choice that the representative citizen has to face in this new context.

First, we assume that the moderates will behave like in the last section 6.b if they are the winner party. Thus, the representative citizen's expected payoff from voting the moderates is positive, even if smaller than in the benchmark case because of the bribe T^* :

$$P^{1}_{votM} = \pi((1-p)(R_{H} + v_{M}) - Cg - T^{*}) + (1-\pi)((1-p)(R_{L} + v_{M}) - C_{g} - T^{*}) \ge 0$$

$$P^{1}_{votM} < P_{votM}$$

In addition, we assume that conditions (transparency of the media, power of the anticorruption institutions...) are such that $T^* > (1-p) v_M$.

On the other side, the representative citizen is doubtful of the new group and believes that its type could be either a low \underline{v} or a high \overline{v} . Another assumption that we make is that these possible types are such that $\underline{v} < v_M$ and $\overline{v} > v_{Conflict}$. Therefore, if the new group was extremist with type \overline{v} , the representative citizen would vote for it given that his expected payoff is larger than the one guaranteed by the moderates:

$$P_{\text{votNG}} = \pi((1-p)(R_H + \bar{\nu}) - Cg - T^*) + (1-\pi)((1-p)(R_L) - C_g) > P^1_{\text{votM}}$$

An extremist group would settle a deal with $R=R_H$ and engage in a conflict with $R=R_L$ but with the presence of high corruption ($T^* > (1-p) v_M$) makes the representative citizen always prefer this outcome than the peaceful deals of the moderates.

Conversely, if the new group was low-type \underline{v} (really moderate), the representative citizen would never vote for it because the expected payoff that it would guarantee is smaller than the moderates since $\underline{v} < v_M$:

$$P_{\text{votNG}} = \pi((1-p)(R_H + \underline{v}) - Cg - T^*) + (1-\pi)((1-p)(R_L + \underline{v}) - C_g - T^*) < P^1_{\text{votM}}$$

This new group would settle a peaceful deal with the government in any state of nature, always pocketing the bribe T^* .

So, the problem for the representative citizen is that he ignores the type of the new group. Without receiving more information, he will make a prediction that the type could be \underline{v} with a probability δ or \overline{v} with probability *1*- δ , with $0 < \delta < 1$. Therefore, we will have that the expected type of the new group in this case will be:

$$E(v_{NG}) = \delta \underline{v} + (1 - \delta) \, \overline{v}$$

Furthermore, we assume that $E(v_{NG}) \equiv v_M$: without information on its type, citizens expect that this new group will have an "ideology" close to the moderates and thus in equilibrium it will behave in the same way, accepting the bribe T^* and settling a peaceful deal in any situation. From the representative citizen's point of view, the expected payoff from voting the new group will be:

$$P_{\text{votNG}} = \pi((1-p)(R_H + E(v_{NG})) - Cg - T^*) + (1-\pi)((1-p)(R_L + E(v_{NG})) - C_g - T^*)$$

Since citizens believe in this case that $E(v_{NG}) \equiv v_M$, we have that $P_{votNG} \equiv P^1_{votM}$: the payoff from being represented by one group or another is expected to be exactly equal. Consequently, the representative citizen will vote in a random way and each party may win elections with probability=1/2. Now, how could this new group signal its type before the elections and, for example, convince citizens that it is more extremist than what they expected?

The solution that the new party has the power to adopt is to make a terrorist attack against the government: this act would have no other goals apart from signaling to the domestic audience that their ideology is strong and thus they are less prone to corruption than the moderates. We assume this terrorist "tool" to be only in the hands of the new group, while the moderates lack the capabilities/will to engage in such a strategy. With this strategy, the new group aspires to signal that $v_{NG} = \bar{v}$, and we already know that $\bar{v} > v_{Conflict} > v_M$. We listed the advantages of this outbidding strategy in the chapters "strategies of extremism" and "the outbidding between Palestinian factions", explaining how effective it could be in influencing the public opinion. Anyway, this attack is not for free but has a given cost C_A that the group must bear: this parameter is known by each player (parties-government-citizens). In addition, we assume that

in case that the new group decides to make the attack, it will happen before the elections (indeed, the new group is interested in influencing the citizens only before they vote).

We may have different equilibria based on the value of C_A . Here we assume that this C_A might have three possible values: high (C_{AH}), medium (C_{AM}) or low (C_{AL}). Making a terrorist attack might be more or less effective on the beliefs of citizens, depending on its known cost. The idea is the following one: if terrorism is so cheap to be within any possible type's reach, using it will not convince the representative citizen that the ideology of the new group is strong. Let's discuss these three cases and the equilibria that they reach.

HIGH COST OF TERRORISM

If C_A is high (C_{AH}), we assume that the representative citizen will expect no party to make an attack since he knows that this cost would make the expected payoff from being the elected party negative for both kind of groups. Here we formalize the expected payoffs of making the attack from the point of view of the two possible group types:

- If $v = \bar{v}$, $P_A = (\pi ((1-p)(R_H + \bar{v}) C_G) + (1-\pi)((1-p)(R_L + \bar{v}) C_G) C_{AH} < 0$
- If $v = \underline{v}$, $P_A = (\pi ((1-p)(R_H + \underline{v}) C_G) + (1-\pi)((1-p)(R_L + \underline{v}) C_G) C_{AH} < 0$

Thus, there is a pooling equilibrium in which the new group does not use terrorism, and the representative citizen expects the type of the new group to be $E(v_{NG}) \equiv v_M$. Hence, he will vote randomly and each party (the moderates and the new group) may win elections with a probability equal to $\frac{1}{2}$.

From the point of view of the new group, the expected payoffs from not making an attack are different depending if it is high type or low type, but in each case positive:

- If $v = \bar{v}$, $P_{NA} = \frac{1}{2} (\pi ((1-p)(R_H + \bar{v}) C_G) + (1-\pi)((1-p)(R_L + \bar{v}) C_G) > 0$
- If $v = \underline{v}$, $P_{NA} = \frac{1}{2} (\pi ((1-p)(R_H + \underline{v}) C_G) + (1-\pi)((1-p)(R_L + \underline{v}) C_G) > 0$

If the new group deviates from this equilibrium and makes an attack, the representative citizen will expect that $E(v_{NG}) = \bar{v}$: it is in fact more convenient for the "real" extremists to make an attack since their expected payoff from winning the elections is larger. Therefore, the new group in this case will be the representative party. Anyway, the new group's expected payoff of deviating from the equilibrium and making the attack is negative, as we explained before, thus it has no incentive in exiting from the pooling equilibrium.

Proposition 6: If $C_A = C_{AH}$, in equilibrium the new group will not make a terrorist attack and the representative citizen will vote randomly. Each party (moderates and new group) will win the elections with probability=1/2.

MEDIUM COST OF TERRORISM

If C_A has a medium value C_{AM} , we assume that the representative citizen expects only the "true" extremists to make the attack because its cost makes the payoff of being the elected party positive only for $v=\bar{v}$:

• If
$$v = \bar{v}$$
, $P_A = (\pi ((1-p)(R_H + \bar{v}) - C_G) + (1-\pi)((1-p)(R_L + \bar{v}) - C_G) - C_{AM} > 0$

• If $v = \underline{v}$, $P_A = (\pi ((1-p)(R_H + \underline{v}) - C_G) + (1-\pi)((1-p)(R_L + \underline{v}) - C_G) - C_{AM} < 0$

Therefore, in this situation we will have a separating equilibrium: if the citizen observes the attack, he will know that $v_{NG} = \bar{v}$ and will vote for the new group. On the other hand, if there is no attack, the representative citizen will know that $v_{NG} = \underline{v}$ and will vote for the moderates, with the new group losing elections. If the new group is low-type, it has no incentives in deviating from this separating equilibrium that guarantees a null payoff (losing the elections), given that its expected payoff from making an attack is negative. In other words, if the new group is not extremist, it will not be incentivized to "mimic" the real extremists by means of terrorism.

From the point of view of the representative citizen, this situation is ideal because there is no risk of voting a low-type \underline{v} : he will in any case understand the true type of the new party. Consequently, the representative citizen is able to choose the party that will in the end guarantee him the best payoff, could it be the moderates or the extremists.

Proposition 7: If $C_A = C_{AM}$, in equilibrium the new group will use terrorism if and only if its type is high \bar{v} . The representative voter will vote for the new group only if he observes the attack, otherwise he will vote for the moderates.

LOW COST OF TERRORISM

If C_A is low (C_{AL}), we assume that it is convenient for any new group's type to make terrorist attacks, thus it will not be useful for the representative citizen to observe terrorism, in order to understand the true group's type. Indeed, the representative citizen expects both kinds of group to use terrorism and will not be able to distinguish them: he will then assume that

 $E(v_{NG}) \equiv v_M$. We will again have a pooling equilibrium with both types of the new group winning elections with probability $\frac{1}{2}$. The expected payoff of doing an attack are positive from the point of view of both types:

• If
$$v = \bar{v}$$
, $P_A = \frac{1}{2}((\pi ((1-p)(R_H + \bar{v}) - C_G) + (1-\pi)((1-p)(R_L + \bar{v}) - C_G) - C_{AL}) > 0$

• If
$$v = \underline{v}$$
, $P_A = \frac{1}{2}((\pi ((1-p)(R_H + \underline{v}) - C_G) + (1-\pi)((1-p)(R_L + \underline{v}) - C_G) - C_{AL}) > 0$

If the new group deviates from this equilibrium and does not use terrorism, the representative citizen will assume that its type is low, since it is less convenient for low-types to do an attack (or, in other words, the expected payoff from winning the elections is less conspicuous if the group is less ideological). In this case, the representative citizen will expect that $E(v_{NG}) = \underline{v}$ and consequently he will vote for the moderates. Therefore, the expected payoff from the point of view of the new group of exiting from this pooling equilibrium and not making the terrorist attack is zero (losing elections). Consequently, in this situation using terrorism is the best strategy for the new group, no matter its type, because it guarantees a positive payoff.

Proposition 8: If $C_A = C_{AL}$, in equilibrium the new group will make a terrorist attack, no matter its type. The representative citizen will vote randomly and each party (moderates and new group) will win elections with probability=1/2.

6.d Discussion of equilibria

We discussed three different cases and we found three critical parameters that influence the choices of citizens before the elections: π^* , T^* and C_A . The support granted to an extremist movement in our model depends on these variables.

The first critical parameter is π^* : countries with high quantity of resources (or with a high probability to have them) are more likely to see extremists taking power, essentially because extremists are believed to be more capable to appropriate them in favour of the population. Moreover, the presence of natural resources could foster rebellion and increase the probability of civil conflicts, as many authors argue (Ross (2006), Collier and Hoeffler (2004)). This parameter is determined by nature, therefore it is complicated to gather some policy implications for the government to avoid the success of the extremists' arguments.

Then, we have T^* , which is the maximum threshold level of corruption that the government is able to perpetrate before being caught. T^* could be seen as a negative proxy of the strength of the anti-corruption institutions of a country, and therefore also a proxy of the level of corruption present. As the value of this threshold becomes higher, the population's support bends in favour of extremists. This is one of the most important conclusions of our model: in the framework that we depicted, corruption fosters extremism. Possible solutions to avoid this phenomenon could be to give more power to the institutions in charge to fight corruption, to encourage the independence of the media or the transparency of the government's activities.

The last critical parameter is C_A . Terrorism increases the possibility of winning the elections for the new group from $\frac{1}{2}$ to 1 only in the case that its costs are not low ($C_A \neq C_{AL}$): a terrorist attacks influences effectively the belief of the population just if it bears a significant cost. Nevertheless, when the costs are medium (C_{AM}) in equilibrium the new group will pursue the terrorist strategy only if its type is high \bar{v} , while in the case $C_A = C_{AL}$ the new group will use terrorism no matter its type. If terrorism bears an excessive cost ($C_A = C_{AH}$), in equilibrium the new group will not make the attack, even if it is an extremist one. What could influence the value of C_A ? It may depend for example on the regime type, with more authoritarian regimes making it more difficult to commit acts of terrorism. Moreover, the "anti-government sentiment" of the population could make it easier and cheaper for extremists to engage in terrorism, as Mesquita argues (2010). Fearon (2007) claims that another proxy for the cost of terrorism could be the orographic conformation of the territory: whenever the landscape is more irregular and mountainous it will be easier for terrorists to hide and program their attacks. Then, of course, the level of counterterrorism employed by the government raises the cost of terrorism. Thus, an increased level of government spending on counterterror activities and intelligence could make C_A more likely to be in the higher of the three possible ranges.

This framework can be compared to what happened in Palestine during the first years of the 2000s, with groups such as Hamas and Al-Fatah competing to gain the support of the Palestinians in the negotiations with the Israeli government. The terrorist attacks made by Hamas had various goals and one of these was to signal to Palestinians that they were more "hardline" with respect to Al Fatah and to the Palestinian National Authority, which was implementing the peace process in Palestine under the supervision of Al Fatah. As we described in the chapter "Main strategies of extremism", this is a situation of outbidding between diverse parties: therefore, the most extreme faction will be incentivized to signal of

being "hardline" for the reasons we listed previously. In Palestine, after it was clear that the peace process initiated by the Oslo accords had failed, and after various years of violence and terrorist attacks perpetrated, Hamas won the elections in 2006, notwithstanding all the surveys made this possibility seem almost impossible. The extremist group had passed from a 12 per cent of popular support indicated by polls of June 2000 to an astonishing 44 per cent in the 2006 elections. Apart from the disillusionment of Palestinians towards Al Fatah, this success is also to attribute to the huge quantity of terrorist attacks perpetrated by Hamas against Israel, as we pointed out in chapter 5.

7. CONCLUSION

This thesis has reviewed the fundamental aspects and dynamics of extremist movements and has outlined how corrupted activities may foster them. We gave a rational explanation of the link between corruption and extremism with the help of a new model that describes both an electoral competition and a bargaining framework.

One of the first conclusions of the model is that the support granted to extremist groups is influenced by the abundance of resources present in a country, with a positive correlation between support and quantity of resources. In addition, we found that the quantity of resources affects the probability of conflict: in our model, a low quantity of resources made reaching a peaceful agreement more difficult during the negotiations between the government and the party. Moreover, we concluded that there is a positive relation between how easy it is to get away with corruption and how likely it is for an extremist political group to win elections. Besides, we demonstrated that the presence of corruption makes it less likely for a group to engage in a conflict, given that a bribe could be useful to "buy off" potential insurgents.

We explained that an extremist group is not necessarily a terrorist one but might adopt terrorist strategies to advertise its degree of ideology to the population. The effectiveness of a terrorist attack on the beliefs of the domestic audience in the model depended fundamentally on the cost of making the attack, that we assumed to be known by the population. We can argue that whenever an attack is costlier, it is more incisive on the perceptions that the citizens have on the group that perpetrated it.

The delicate question of how to address these problems is left to who is in charge to fight extremism and corruption. However, as Sarah Chayes (2015) argues, whenever a western government or an international organization intervenes to address these issues in developing countries, it has necessarily to be aware of the kleptocratic mechanisms that could contribute to generate grievances within the population. It is necessary to support effective law enforcement and transparency of the institutions due to fight against the powerful kleptocratic networks present in these kinds of countries.

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