

RETHINKING THE CONFLICT TRAP: SYSTEMS DYNAMICS AS A TOOL TO UNDERSTANDING CIVIL WARS -THE CASE OF COLOMBIA-

"the man is incapable of recognizing truths when contradictory programs exist"

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Abstract

This paper presents the first phase of a work in progress which aims at building a System Dynamics model around two theories concerning internal conflict. The model will assess the particular case of Colombia, that is characterized by the presence of armed groups that interact strongly with the illicit trade of drugs, the kidnappings and extortion, and have a discourse that places emphasis on political grievances.

The different theories around the economics and causes of war can be separated in different trends. This work assess two of them: the first one argues that wars are economically motivated, and that the real objective of armed groups is the quest for money; this theory is characterized under the term greed. On the other side, there are the social, political and historical factors that allow and facilitate the emergence of armed groups (grievances). This investigation aims to develop a better understanding of the complex interactions around the Colombian conflict, considering both theories and seeks to build a better comprehension of this conflict in order to study how to generate development during an internal conflict.

Keywords: civil war, conflict, grievances, greed, negotiation, war, Colombia, system dynamics.

1. Introduction

Colombia has experienced for more than fifty years a civil war¹, this makes this conflict *"the longest-running twentieth-century internal conflict that has endured into the twenty-first century"* (Chernik, 2005). This conflict can be understood from different angles, it can be seen as a greed-motivated conflict, or as the result of a series of grievances.

The importance of understanding the differences between these theories is that the embracement of any theory might imply biases on policies aiming at tackling the conflict in Colombia. The aim of this paper is to gather a better understanding of civil war, specially a bigger understanding of the complex interactions around the Colombian conflict.

To represent both theories the article is organized in four sections, in the first section there is an introduction to the Colombian Conflict, the second section presents an introduction to the theory of Collier, representing on a causal loops diagram this theory and their main hypothesis; the next section focuses on other theories that embrace the concept of grievances; finally on the last two sections there is a discussion of the implications around public policies of embracing one of the two theories, and then is a series of proposals aiming at formulating possible actions related to a joint theory that unites greed and grievance as an explanation of conflict in Colombia.

¹ The definition of the Colombian war as a civil war might be controversial; in fact several authors describe the Colombian conflict as something different to a civil war (Posada, 2001), for example, for the Colombian government, the guerrillas are narco-terrorist groups, and Colombia does not have a civil war. This article will embrace the definition of a civil war proposed by Small and Singer (1982) that defines a civil war as an internal conflict with at least 1.000 combat related deaths per year.

2. The Colombian Conflict

The magnitude of the conflict can be measured in the deaths related to it since 1948, having more than 300.000 deaths related to political crimes (Chernik, 2005), and also having the worlds second biggest displaced population (Collier *et al*, 2003) (UNHCR, 2002).

The complexity of the conflict can be understood around the different elements that interact around this war. First of all, this is not a war of a single group against the government. In Colombia there are tree insurgent groups, two left wing guerrillas (ELN and The FARC²) and a “right wing guerrilla” the AUC³.

This complexity emerges as the result of other problems related with the conflict, for example the AUC and the FARC are related to some extent with the drugs production and trade (specially since 1990 when successful anti-drug policies brought to Colombia the production and sowing of cocaine and coca) (Diaz, 2005), the ELN has a parasite behavior around oil revenues and oil exploitation (Guaquetá, 2003), all groups use extortion and kidnapping as a mean to acquire resources to finance their war in some extent (Richani, 1997). Additionally, all of them have taken advantage of the decentralization process of the country (aiming at a better public management and a greater political openness), to gather control over regional governments having predatory and parasitic behaviors on concessions, health care institutions, lotteries, among other public resources and institutions that allow these armed actors to acquire economic power as well as political control over some regions of the country (IEPRI, 2006).

This process has been parallel to a series of changes (call them mutations or adaptations) of the armed groups as a consequence of the Colombian environment, that brought coca crops to the country, the rise of drug dealers, the insertion of paramilitary forces in security forces, a broader democratization of Colombian institutions, a economic liberalization process, the fall of the Soviet Union that made armed forces to embrace a pragmatic perspective to guarantee their economic sustainability⁴. This new paradigms in the armed groups difficult the distinctions and make blurry the limits between political struggle and economic opportunism.

² Ejército de Liberación Nacional (National liberation army), a Maoist group that born in the 1960's that emerged as a grievance around the oil revenues and as a student movement. (Corporación observatorio para la paz, 2001).

Las Fuerzas Armadas Revolucionarias de Colombia (The revolutionary armed forces of Colombia) born also in the 1960's as an armed group that asked for a land reform and as an answer to the government violence. (Leal, 2006)

³ Las Autodefensas Unidas de Colombia (United Self Defence of Colombia) is a group born in the 1980's as a reaction to the FARC and the ELN kidnappings and extortions. Funded by cattle and land owners and in some cases by drug dealers is a group that defends the Colombian Status Quo (Pardo, 2007).

⁴ The article “la guerrilla mutante” of Román Ortiz discusses this “evolution (Leal, 2006).

The aggregate effect of the actions of all these actors contribute to undermine the state presence over the country, this creates an environment in which many people can behave opportunistically with no cost, because the institutions are weakened (Richani, 2002), and legal economic opportunities are undermined (Collier et al, 2003), also there is a diminishment of social capital on a society (Collier et al, 2003) that allow the armed groups to acquire power and control over the territory and the institutions.

This can be understood as a vicious cycle where war undermines state presence, this allows opportunistic behavior to emerge, and causes a greater lack of state presence that make the country even more prone to war (Ballentine, 2005). Also there is the presence of an economical system that is dependent on the war, as Isaza (2007) mentions, “from the 566.084 workplaces hired by the government, 81,2% will be occupied by public servers assigned to defense, security and police” creating a bureaucracy of war.

The government has answered to this panorama with an increase in the military expenditure to a 6.5% of the GDP in 2007 (Isaza, 2007), aiming to have a greater presence of the government in the different regions of the country, that have caused an increase in the quantity of government soldiers and policemen (see Table 1). This increase in the military capacity has been also a consequence of the external aid provided by the United States through the Plan Colombia, so these values of the economic investment might be lower.

YEAR	GOVERNMENT
	SOLDIERS
1948	10.000
1957	40.359
1974	50.675
1986	85.911
1994	120.650
2002	160.000
2006	196.492
2007	209.741

Table 1. Number of soldiers in Colombia. Source: (Isaza, 2007)

In recent developments, there has been a peace treaty with paramilitary forces, that have

brought to demobilization 25.000 members of a paramilitary group of 12.000 members⁵ (Pardo, 2007) (Isaza, 2007), also there has been several attacks of the government to the secretariat of the FARC⁶, bringing the question around the possibility of the end of the conflict as a consequence of the strengthening of the government (see table 2).

YEAR	FARC + ELN FORCES
2002	20.600
2003	19.387
2004	17.003
2005	14.841
2006	13.799
2007	12499

Table 2. Number of combatants of left wing guerrillas. Source: (Isaza,2007)

No matter what could be the scenario on the next years, the military defeat of the “remaining” armed forces, or the political negotiation with the armed actors, the interplay between economic and political aspects of the armed conflict can’t be ignored (Ballentine, 2003).

Additionally, there are several considerations that must be taken:

1. In the case of a possible political agreement between the government and the left wing guerrillas, there exists the fear of a similar bullwhip as the case of the treaties with paramilitary forces. In spite of the peace process and the demobilization of paramilitaries, there has been the emergence of new paramilitary groups involving demobilized paramilitaries.
2. Opinion polls in Colombia after successful attacks by the government on guerrillas show that the Colombians believe that is better a political negotiation with the armed groups.
3. The “end of the internal conflict” in Colombia won’t necessarily imply the end of the security problems in the country. Several FARC units might reject the sign of a peace agreement, a fragmentation of the armed organizations is possible, and there also exists the worry on the possibility of a later increase in violence as in Salvador

⁵ As a consequence of these inconsistencies, there has been a huge criticism around this process from internal parties in Colombia, as well from NGO’s as Amnesty International and Human Rights Watch.

⁶ The “secretariat” is the highest hierarchical structure of the FARC, composed by the oldest leaders of the organization.

after his peace treaty.

To understand this complex relationships there are different theoretical trends. This work will embrace two of those trends, one focuses on the economical aspects and motivations related to the conflict (usually called as greed)(Collier, 1998)(Collier et al, 2003)(Collier, 2000), and the other incorporates the political aspects and historical contexts on the analysis (the so called grievances)(IEPRI, 2006)(Arnson, 2005)(Ballentine, 2003).

3. Utility of using system dynamics

Forrester pioneered the work in system dynamics (SD), introducing feedbacks and delays to the comprehension of the behaviour of complex systems, allowing a better knowledge of the factors and elements that interact with a problem. For these reasons system dynamics has been recognized as a potent methodology to study and represent theories (Sterman 2000).

This value rests not only in the capability of representing interconnected complex structures, but also on their capability to allow the comprehension and representation of different elements related to a problem, permitting the discussion of different theories and perspectives of a same problem (Vennix, 2000).

Some of the different abilities of system dynamics models are the capacity of building models with complex relationships with a large number of variables, considering many related aspects of a problem resulting in a holistic approach, allowing the capacity to incorporate in a model different worldviews around one problem. Also a system dynamics model could be helpful to explain and understand how the structure determined the past behaviour of the problem, and to understand how different policies can interact with the feedback structure of a problem.

The system dynamics model could be suitable for analyzing the Colombian conflict as it is a complex situation that has the interaction of different problems actors, interests and feedbacks (see section 2, 4 and 5).

Particularly, embracing a system dynamics model to analyze the Colombian internal conflict permits to make explicit the relationships among variables, to identify variables that are part of the interactions, and to model the assumptions of the different theories. This does not neglect the utility and advantages of econometric studies⁷ to understand the civil wars, and also does not ignore pitfalls in which a SD model could fall, because of the interest to understand historical tendencies and behaviours, and the interest for endogenous explanations to the problems rather than external effects. (Meadows, 1980)

⁷ The study of a civil war from econometric perspectives might have weaknesses related to Operations Research that have been discussed by several authors. (Atkinson 2004) (Ackoff, 2001) (Forrester, 2003). Collier studies were based on econometric analysis, and this methodology is commonly used to study conflict and their causes.

4. Greed

In his seminal work, Collier (2000) defines several aspects that catalyze the possibility of a civil war: the dependence of a country on primary goods, low growth rates, low education levels, and a big proportion of young people on the population. On a later work three factors are significant, these are the income per capita, the growth rate and the dependence on commodities on their exports (Collier et al, 2003). In both studies, social and political grievances do not contribute significantly to the emergence of civil conflict.

Collier found that factors commonly identified as conflict causes, such as ethnic heterogeneity, the level of political rights, socioeconomic inequality, economic mismanagement and regimen type have no statistical influence on the incidence or outbreak of civil wars; for these reasons, that political grievances have no direct political link to the onset of conflict (Ballentine & Sherman, 2003).

This approach presented a contrast with other interpretations that focused on the inequality and the grievances of the population (Collier et al, 2003).

4.1 The idea behind the study of Collier

Like all wars, civil war economies are characterized by the militarization of economic assets and the incorporation of several activities to finance the war itself. Recent studies have found the parasitic nature of the interaction of armed groups in the conflict and the interest of rent seeking by armed groups (Ballentine & Sherman, 2003).

The focus of Collier is a classical political science definition; he investigates all wars that took place during 1960-1999. A comparison of these countries with the rest of the countries in the world in order to understand the emergence of civil war is done (*Collier et al, 2003*). The hypothesis is that rebels will conduct a war if the perceived benefit outweighs the costs of rebellion (Collier, 1998). From this analysis it can be inferred that war will emerge only as a product of economic conditions.

This explanation is constructed around Grossman hypothesis (1999) of civil wars, that say that civil wars are not explained by grievances, but by the atypical circumstances that generate profitable opportunities (Collier, 2004). For the authors, the objective of rebellion is either capture the state or secedes from it; the incentive for rebellion is the product of the probability of rebel victory (Collier, 1998)

The authors expose that civil war might be explained by severe grievances such as high inequality, lack of political rights, or ethnic and religious divisions in society. After the econometric analysis, it was found that economic variables are more related with the viability of the war, and have a greater explanatory power on the emergence of conflict,

while the political or social variables have little explanatory power (Collier, 2004).

4.2 Results of the Study

The study concluded that the probability of victory is decreasing as a function of government military expenditure per capita, also that higher per capita income reduces the duration of civil war and the probability of its occurrence, the possession of natural resources and their loot-ability initially increases the duration and the risk of civil war, land and income inequality are not significant as variables (Collier, 1998).

The variables related to rebel military advantage and that are statistically relevant are population dispersion and social fractionalization (Collier, 2004).

Four variables, initial income, ethno-linguistic fractionalisation, amount of natural resources, and population size are strong determinants of civil wars, (Collier, 1998) neither income inequality nor land inequality are significant (Collier, 2004).

The theory of Collier could have a high relationship with the Colombian conflict. By several reasons, the Colombian conflict can be understood as a greed-motivated conflict. Some examples of this relationship could be the following elements:

- The 45% of the income of the FARC comes from illicit drugs .The AUC make up to a 70% of their incomes from illicit crops and illicit drugs (Guáqueta, 2003). For example the FARC has trade revenues related to drugs around U.S. \$ 3.2 million from 1991 to 1999 (Guáqueta, 2003). This kind of facts allows the statement that currently the Colombian conflict is motivated by greed.
- There is an “economical system” that fuels and depends on the conflict itself (Richani, 2002).
- The dependence on the economy of Colombian armed groups to finance their war, has driven armed groups after the fall of the Berlin wall to use the economy (legal and illegal) as a mean (or an end) in their fight to conquer power.
- FARC, ELN and AUC rely on kidnapping resources to finance their war (Guáqueta, 2003).
- The interplay of the “illicit economies” with the armed conflict has fuelled the conflict and the growth of armed groups, explaining the expansion of the FARC and the AUC (IEPRI, 2003). The incomes of the armed groups changed from extortion and kidnappings to illicit crops protections and finally to illicit drugs production in two decades, this transformation in the income structure of the armed groups affected the structure and political motivation of them.

Some of the ideas of Collier can explain several aspects of an internal conflict, but particularly in Colombia, the theory is not capable of explaining all the interactions of the problem. This model is based on the crude interpretation of the rationality of actors in all their decisions (in the case that it exists). For example, if Collier thesis were correct, in the Colombian case, people would choose (between left wing and right wing guerrillas) to go to the paramilitary forces because they pay a higher wage, and even if they were choosing among left wing guerrillas they would choose the ELN because they have a higher wage than the FARC, making this armed group the less likeable of all armed groups in Colombia (against the reality of the Colombian conflict) (Sanín, 2004).

4.3 An approach to the Colombian conflict seen through System Dynamics and Collier thesis

A system dynamics representation of Collier theory could help understand policy resistance, the inertia of the war system (Richani, 1997) and delays related to implementation of policies and their consequences (Sterman, 2001).

The model presented here (see Model 1) will focus on the two main ideas of the theory. On the one hand it presents the problem of the consequences of a civil war that increases the instability and gives momentum to the uncertainty in the country, reducing the investment capacity (or decelerating it) and worsening the crisis.

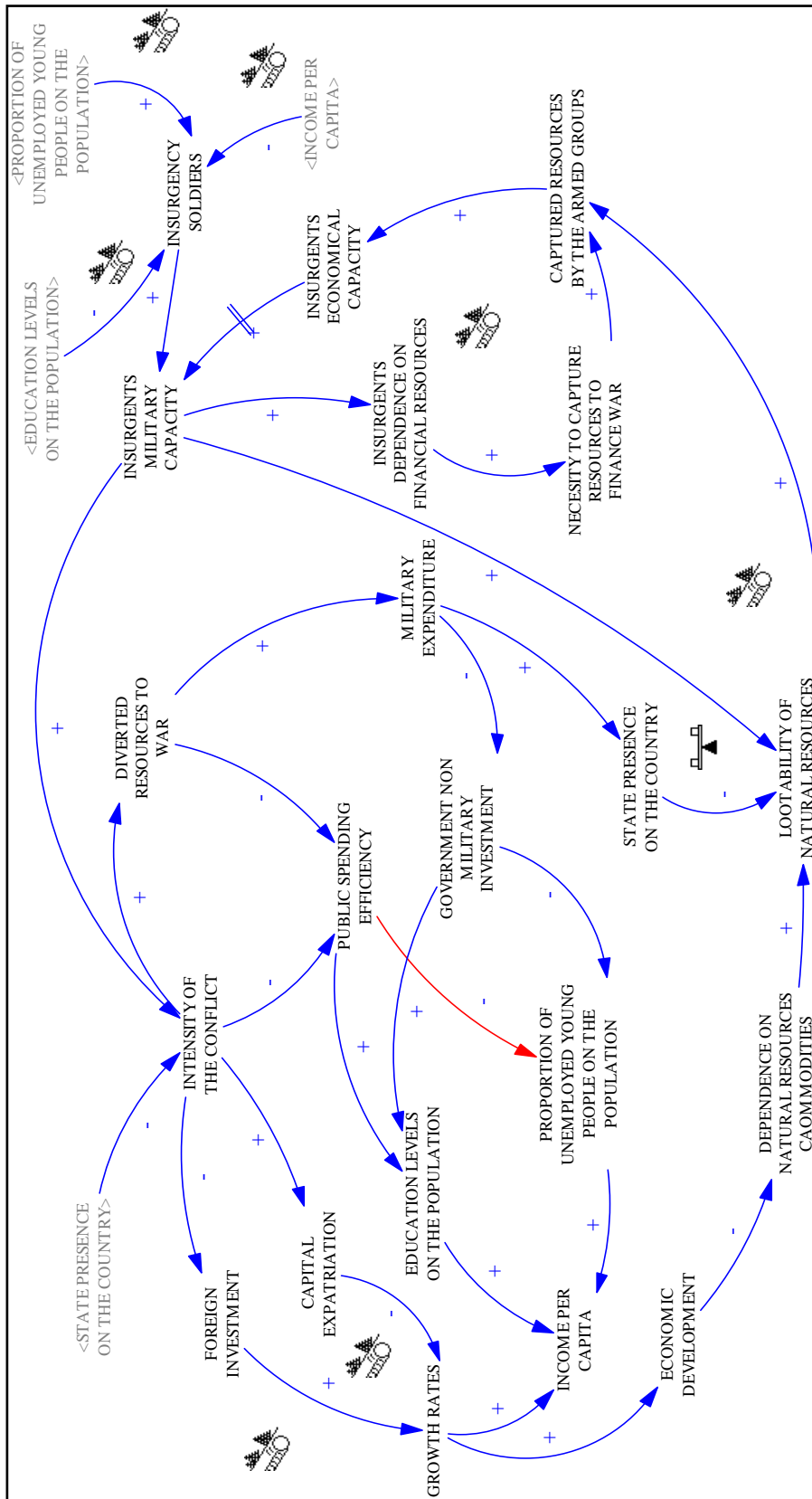
On the other hand the model incorporates the dependence of a country on primary goods, low growth rates, low education levels, and a big proportion of young people on the population.

As can be seen in the model one, there are several reinforcing loops around the civil wars, this reinforcing loops increases (or decreases) continually the dependence on natural resources as primary exports in an economy, as the war goes on, the industrial capacity of the country decreases, and this causes that the possibility of the armed groups to divert or to capture rents from this resources increases.

Also it can be seen that with the increase in military spending, aiming at a debilitation of the power of armed groups, affects the capacity of the government to provide education and therefore causes an increase in the unemployment rate, which could increase the military power of armed groups, which in a poor and jobless country become an interesting opportunity to vulnerable population. In the Colombian case this could be possible, but also we must consider that a big part of the resources devoted to counter-insurgency fight is derived from international assistance.

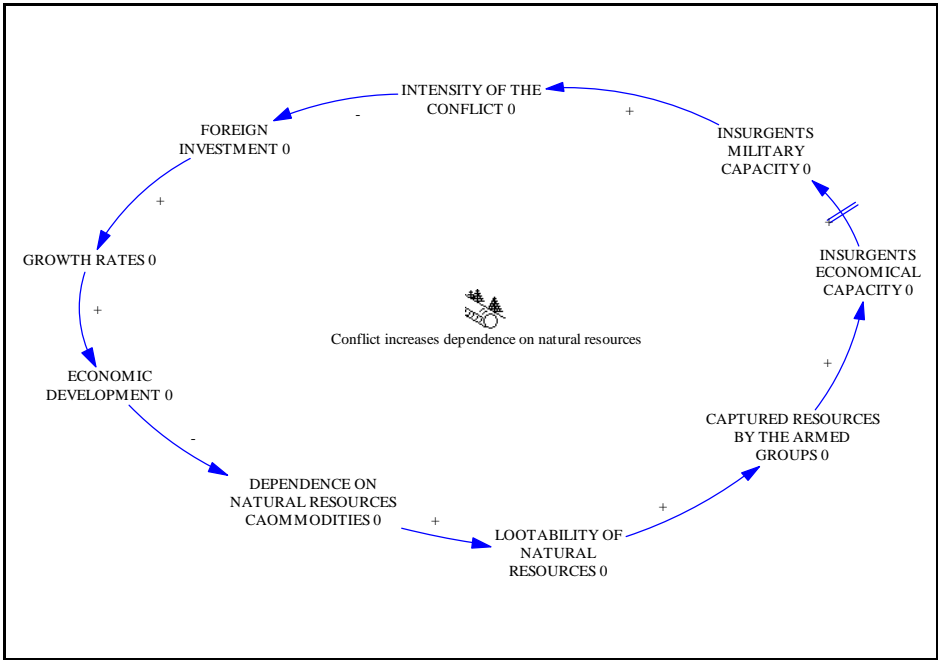
This model could illustrate the vicious circles in which a country is immersed once a civil war starts; also this can help us to understand the inertias related to war that explain the persistence of this conflict. It can be seen that a militarist strategy only can change the

balance of war in a short period of time, and their effect can be different if we analyze this on the short or in the long term.



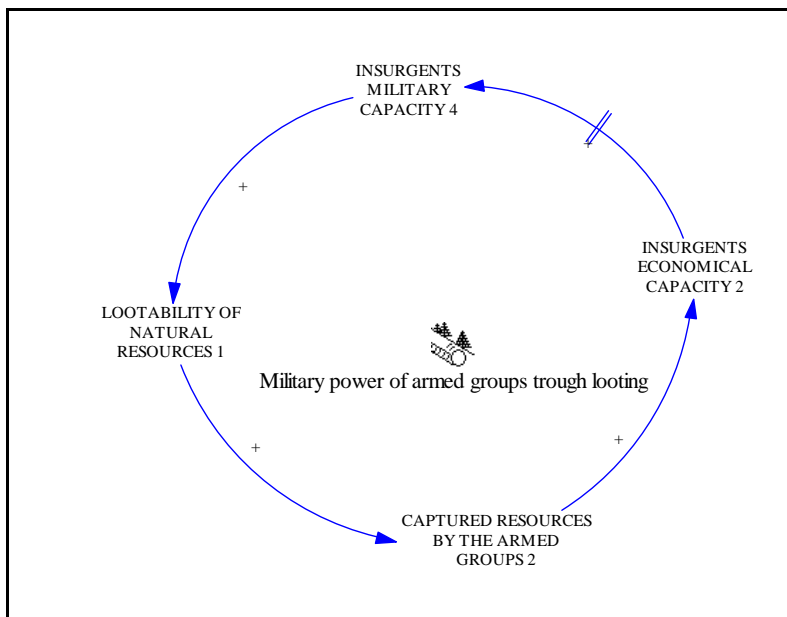
Model 1. Causes strip diagram of Collier's theory

The armed conflict of Colombia can be characterized as a system affected strongly by several reinforcement loops, for example, as Model 2 represents, we can have the negative effect of an armed group on the foreign investment in a country, because armed groups increase the risk and the uncertainty of investments. This risk affects, end even reduces the growth rate of a country. Finally this lack of investment causes in the country a greater dependence on natural resources (generally technology comes to Colombia as a result of foreign investment). This higher dependence on natural resources causes a greater exploitation of natural resources to fuel the economy, exploitations that makes more prone to pillaging the natural resources of the country. The revenues obtained by armed groups from this looting will cause a greater military capacity of armed groups to cause unrest in the country.



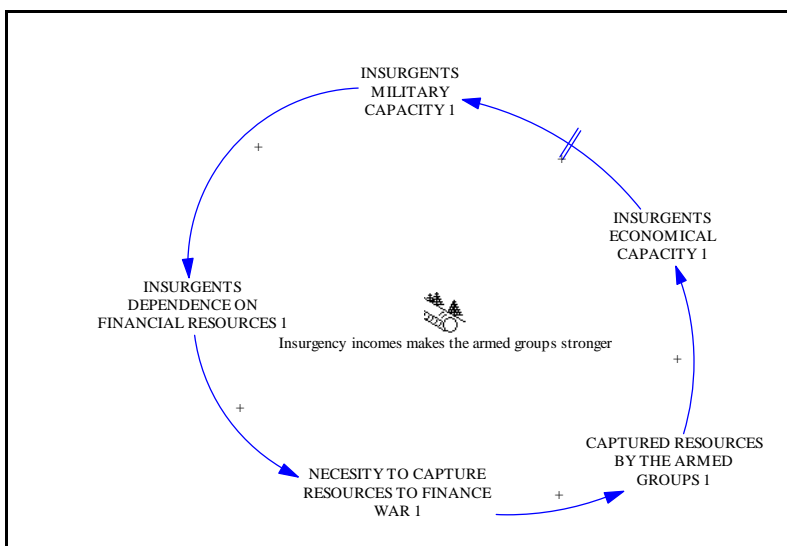
Model 2. The effect of the conflict in the dependence on natural resources

This instability in the country is not only caused by the reinforcement loop of Model 2, additionally a greater military capacity of the insurgents allows the armed forces to extort and to gain access to funds from natural resources exploitations (see Model 3). The capability to increase the military capacity of armed groups as a consequence of more financial resources is not immediate, and for this reason there should be a delay in this process (related to the allocation of forces and the training of new soldiers).



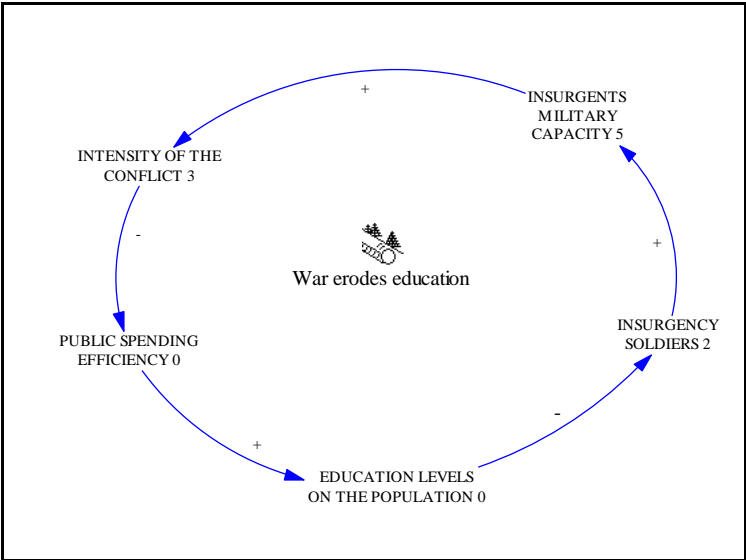
Model 3. The effect of the incomes on the insurgency strength

The process of strengthening of the illicit armed forces allows them a greater military capacity, but this greater capacity has as unexpected consequence, a greater dependence on natural resources, requiring in some cases the allocation of soldiers to guard territories were financial resources derived from natural resources come. This can be seen in the case of illicit drugs were frequently FARC and AUC forces are allocated in the nearby of illicit crops.

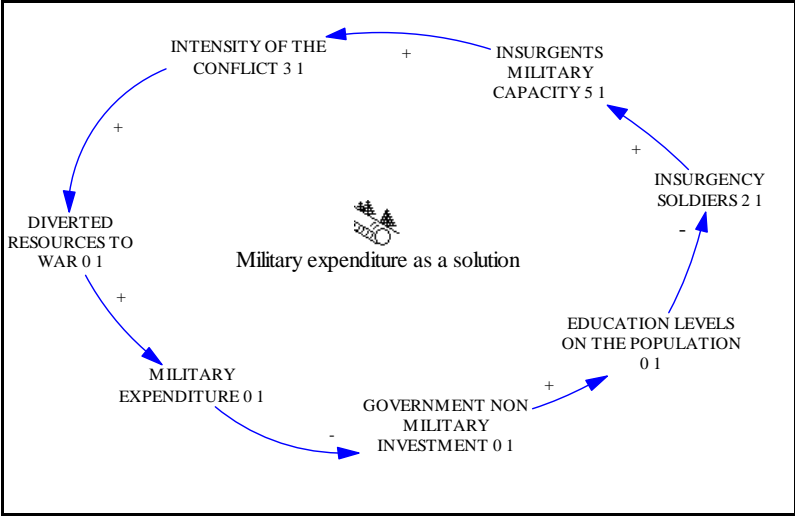


Model 4. Looting of natural resources by insurgency forces.

Unfortunately, the conflict not only causes an inertia that fuels the conflict through the use of financial resources by armed groups, but also as well the war itself causes a reduction of investment on education (directly or indirectly) causing in that more people will not have access to education, and this lack of education would cause a lower income that would make prone these persons to entry armed groups in the seek of a job (see Model 6). This reduction on resources diverted to education might be caused by a direct realignment on public investment towards the strengthening of army forces or as a byproduct of public investment inefficiencies (according to the capture of public organizations by armed groups) that reduce the final amount of money on education and health (see Model 5).

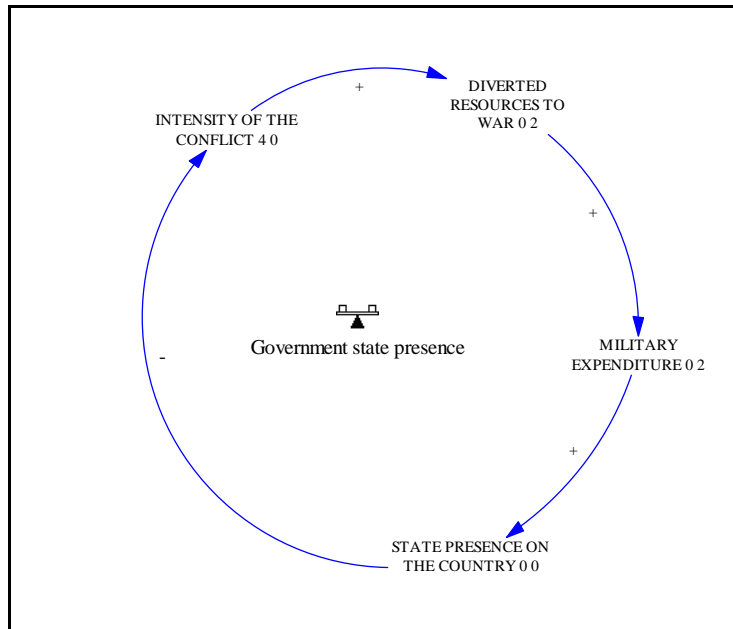


Model 5. The effect of the conflict in the education



Model 6. Military expenditure as a solution to conflict

The government usually reacts to these problems trying to improve their presence around the country, specially the countryside of Colombia; because the lack of a state presence on those territories allow the presence of the guerrillas and therefore their strengthening trough the looting of financial resources. This presence in the long term will mean a lower intensity of the conflict as a consequence of the weakening of illicit armed forces (see Model 8).



Model 7. Government reaction to conflict

This model does not include the escalation effects or clashes among armed actors, as well as the use of public resources that are utilized by the insurgency groups to finance their strengthening. Also the model does not involves the ethnic or religious differences (because the Colombian conflict is not characterized by this aspects) and their impact on conflict. Also the difficulty of the terrain and how it affects the capacity of insurgents to wage a war is not included even though the Colombian terrain is characterized by its roughness that is used by guerrilla movements to have a tactical advantage; this exclusion is made by the interest to model Colombian conflict trough an endogenous focus.

5. Grievances. ¿Need?

On the other side, several authors argue that few contemporary conflicts can be characterized as a conflict caused by loot seeking (Ballentine, 2003) (Arnson, 2005), this argument does not deny the fact that in several cases the economical factor combines with political factors to facilitate the outbreak of hostilities(Ballentine, 2003).

This leads to the idea that civil wars emerge as the product of the grievances - a complaint, generally against an authority figure – of a population, that depend on economical factors to their development, among other causes, but does not causes the conflict itself.

The grievances can be understood as statements made by the population against a regime that lacks of legitimacy on the social (lack of presence, social inequality, and land inequality) and political levels (lack of representation, illegitimacy). In some cases this grievances can be fuelled by a weak institutional capacity and the corruption of state elites, that creates a permissive opportunity for conflict (Ballentine, 2003).

The existence of an internal conflict is explained broadly by the grievances that create an environment prone to the conflict, and the aspects mentioned by Collier (1998) as the dependence of a country on primary goods, low growth rates, low education levels and a big proportion of young people on the population are really a manifestation of a weak state, if there is truth that variables related to the greed are less statistically significant to explain the emergence of conflict, neither we can neglect the relationship between politics and war and their real incidence on war. As Clausewitz (2005) stated a long time ago:

“War is the continuation of politics by other means”

Following these ideas we can understand internal conflicts as politically motivated (Zartman, 2003), economically run situation that has caused the confusion around the importance of economical aspects on civil wars. The insurgent groups have been involved on economic activities, and the conflict has shaped the character of the fighting and their involvement in economic activities (Ballentine, 2003) (IEPRI, 2006).

This “evolution” has caused that some conflicts that have begun with political motivations have mutated onto conflicts where short term economic benefits are paramount (Ballentine, 2003), in order to finance the war, and in some cases the search of economic benefits has become and end of the insurgent groups (Ortiz, 2004 on Sanin, 2004).

Additionally war itself, and their dynamics creates new grievances by the further state debilitation, the capture of rents of the armed groups, creates more grievances that fuels the conflict strengthening the armed groups or allowing the creation of new armed groups, as can be the case of the AUC in Colombia (Pardo, 2007).

For these reasons, it is important to contextualize the economic dimensions of specific

contexts historically, focusing in the transformations undertaken in Colombia and in the world that affected the Colombian armed conflict, having an historical perspective on mind and understanding how inertias around the Colombian conflict fuels the war, incorporating social and political aspects on the comprehension of the conflict evolution.

5.1 Considerations on the Colombian case

In Colombia, the quest of the left wing guerrillas has been the exercise of the political power, redressing historically rooted socio-economic grievances of marginalized classes (Palacios, 1995) regarding the political system that Colombia should have (Guáqueta, 2003 on Ballentina, 2003)

The guerrillas asks for a socialist welfare system and the redistribution of wealth (Guáqueta, 2003, on Ballentine, 2003), and a series of policy reforms regarding employment policies, international exchange and foreign relations.

The evolution of the conflict in Colombia has not obeyed to economical aspects that determined the emergence of the conflict (but rather have explained the persistence of it). The birth of the FARC as a revolutionary force emerged as a consequence of a military operation of the Colombian government on peasants in 1964 (IEPRI, 2005). The birth of the ELN, more than the search for rents, was a by product of the political turmoil in which Latin America was immersed in the 1960's decade, when Cuban revolution took power, actually this group borne as a grievance around petroleum revenues and their exploitation by foreign enterprises. The AUC was born as a reaction, a grievance around the violence generated by the guerrillas, and the lack of presence of the state in rural areas of Colombia.

The claim of guerrillas of an agrarian reform was valid in the origins of both left wing insurgent groups, but has lost validity thorough time as a consequence of the urbanization of Colombian society, also with the fall of the Berlin wall, the guerrillas have lacked the resources to finance their war, as the need for resources became greater they used the extortion, kidnappings and illicit drugs to finance their war. These incomes, specially the illicit drugs trade gave the guerrillas a bigger involvement in economic activities, giving a better economic sustainability, as well as quicker rates of recruitment and a greater capacity to influence regional governments, but undermined the acquired social capital of the group as the perception that the end of the guerrillas was now more the rent seeking, rather than the initial grievances (Ballentine, 2003). In spite of these facts and the relationship of the armed groups with economic interests and the evolution and the consolidation of this symbiotic partnership, the armed movements still care about political power, as an end or as a mean to consolidate and legitimate their acquired economical power. (Pardo, 2007)

The latter considerations don't imply that the self financing nature of contemporary insurgence is not important, actually this nature complicates and prolong the conflicts, restricting the feasible solutions and a further negotiation (Ballentine, 2003) in addition, there is the fact that the armed groups are interested not only in social or political claims

(IEPRI, 2006).

Additionally, casting insurgents as mere criminals and organized robbers may lead to a profound mischaracterization of what is really at stake. For this, clarifying how economic factors promote or sustain particular armed conflicts requires a more careful empirical investigation (Ballentine & Sherman, 2003); in particular a profound study of the Colombian conflict is needed to understand the emergence and the evolution of this war.

5.2 An enhanced approach to the Colombian conflict seen thorough System Dynamics

As represented in the Model 8 below, this causes strip represents the theories of Collier, and additionally incorporates to the model the social and political grievances as consequences and causes of the war.

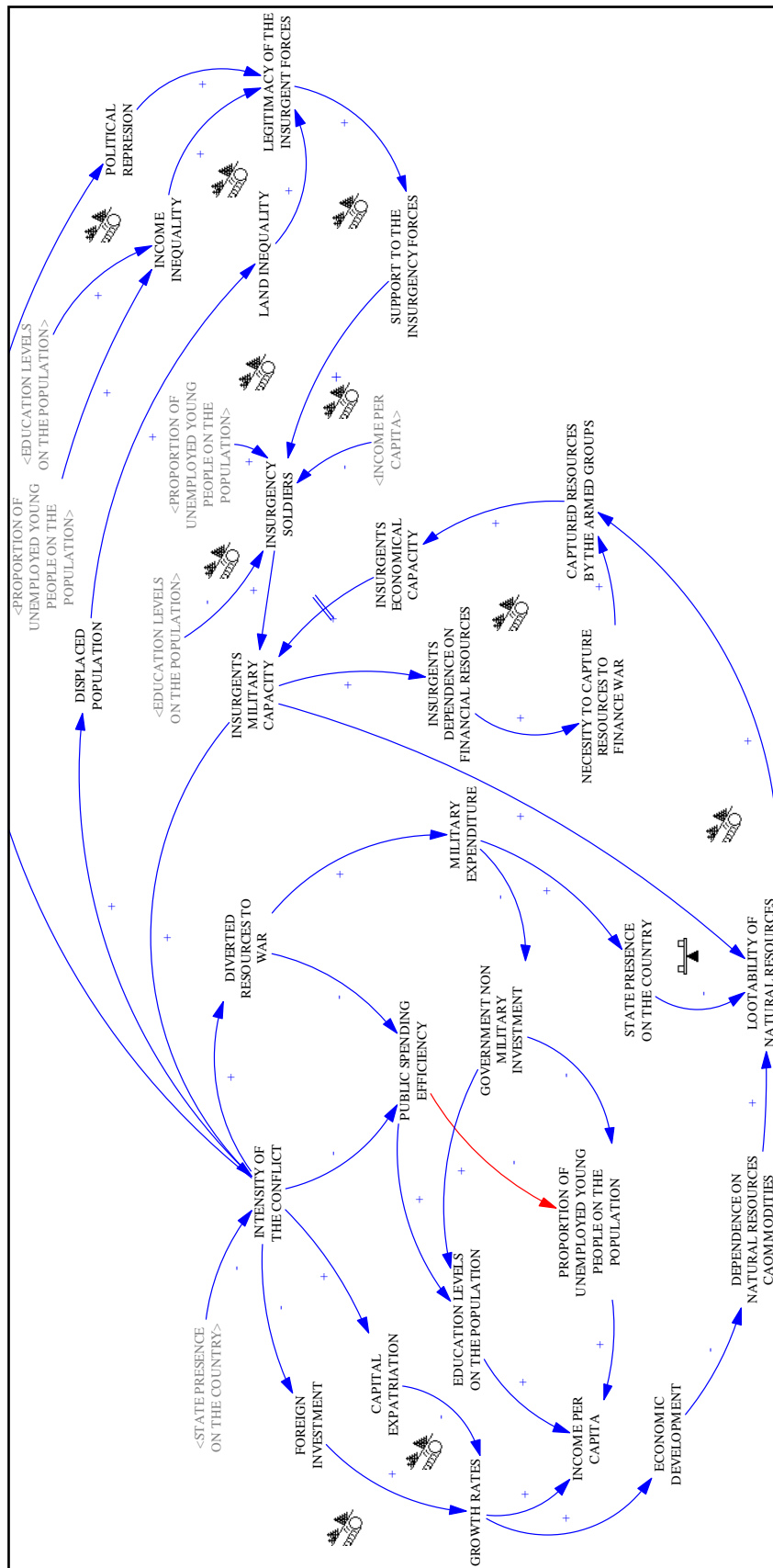
The political repression is one way in which governments can act to restrain rebellions and civil wars, as the model represents it, when the government increases their political repression, the support for the insurgency causes falls initially, but in the long term increases, helping the insurgents to recruit more soldiers to their cause.

One important factor is the effect of the intensity of the conflict as a self perpetuating dynamic, because this built hatred increases the amount of persons that want to enter to the war, not motivated by the political ideas behind the armed groups, the possibility of an income, but rather by the thirst of vengeance.

Income inequality as a result of armed conflicts that creates wealth to a small fraction of the population, or the war that is used as a mean to gain economical power, fuels the conflict, legitimating the political discourses and allowing the insurgency groups greater rates of recruitment.

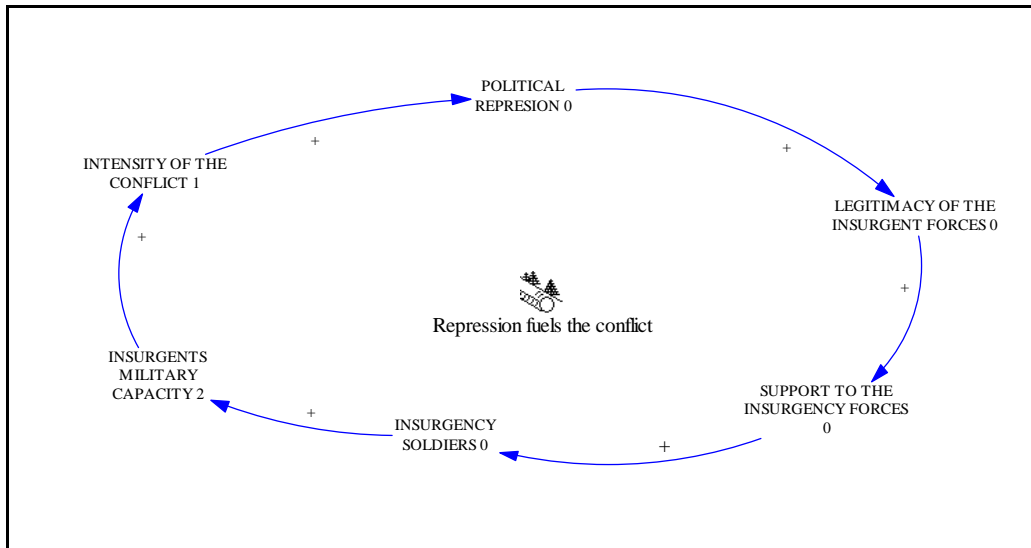
The land inequality is a consequence of the displacement of population, usually in Colombia, when a population is displaced, their lands are robbed or bought at low prices as well, allowing warlords to increase their economic power, but fuelling the discourse of the guerrillas that since 1960's have claimed for a land reform, and therefore increasing their capacity to recruit soldiers.

Once again, it can be seen the effect of reinforcing loops in the dynamics of the conflict.



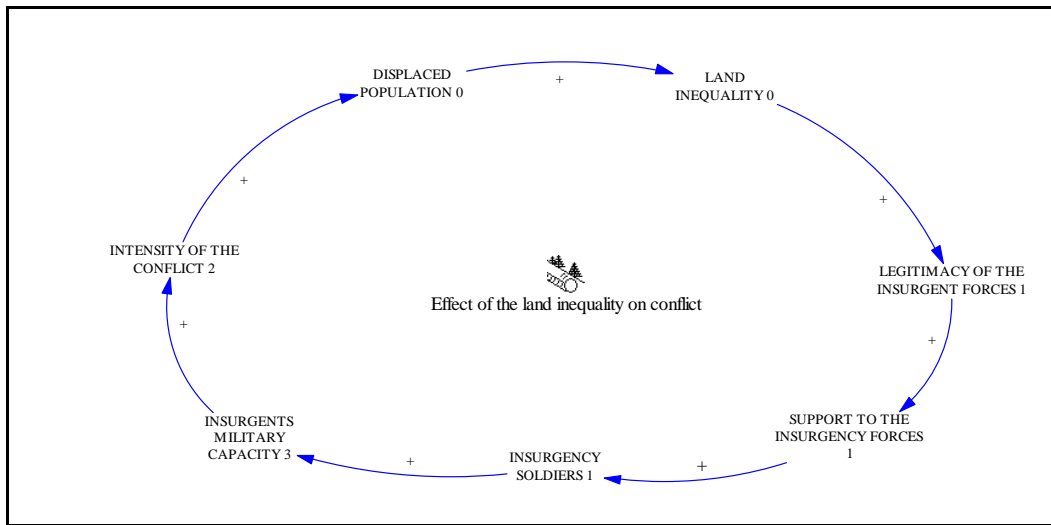
Model 8. Causes strip diagram including grievances

These loops can be seen around the impacts that have the political repression on the conflict. As can be seen on Model 9, when the war escalates, armed actors wage war indiscriminately killing, pursuing and massacring “possible” supporters of enemy armed forces. This can be seen as an strategy that aims to gain a greater support among an specific population trough fear and awe, but in the long term this strategy is counter-productive, because that repression increases the legitimacy of insurgent forces (a logic such as “the enemy of my enemy is my friend”), increasing the military capacity of their forces and therefore escalating the conflict. Additionally (see Model 10) this actions lead to a greater displaced population (Colombia had in 2007 the second biggest displaced population in the World⁸), that has to flee from their houses and their farms in order to survive. This abandonment of their properties opens the opportunity to the appropriation –or expropriation- of those terrains by the armed groups. In the context of an armed conflict where insurgent groups dispute among themselves the control over certain areas of the Colombian territory, conducing to a greater inequality among Colombian society, because those expelled persons from their homes flee to fill the misery belts around Colombian cities, in which once again armed groups opposed to those who expelled the farmers to the city gain support from the population. This behaviour could be seen as an escalate effect, as in the Braun archetypes.



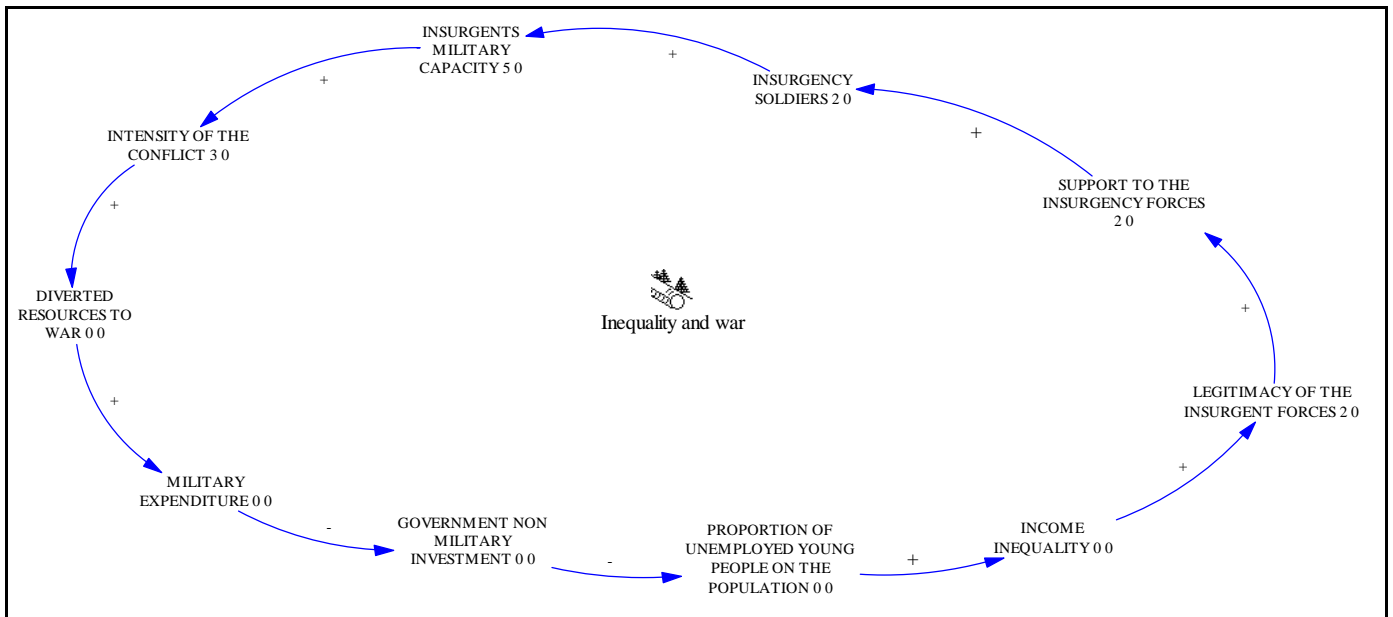
Model 9. Impact of the repression on the conflict

⁸ In 2008, according to ACNUR Colombia has the biggest displaced population in the World, even greater than well known humanitarian crisis such as the one in Sudan.



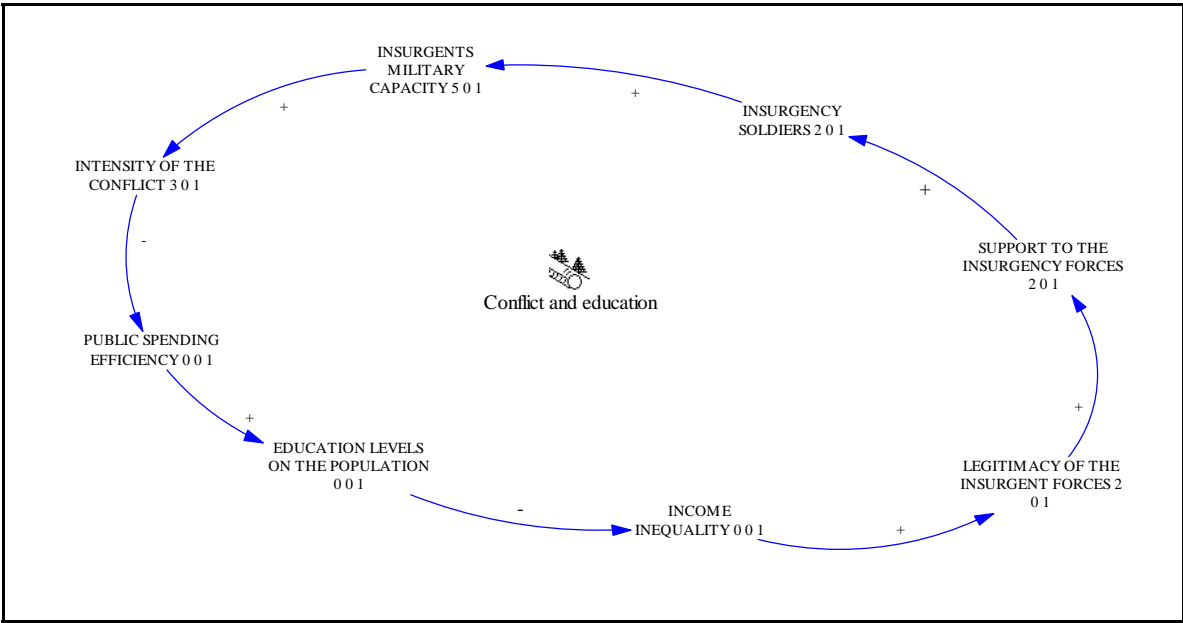
Model 10. Effect of inequality on conflict

The problem of a possible solution to the conflict such as the military investment is once again similar as the one related to the Model 6. In this case the reinforcement loop on war comes from the devoted resources of the government to other investments such as education (see Model 11). This reduction in those budgets causes a higher proportion of unemployed population, population that surely will lack of the necessary resources to fulfil their primary needs, causing a greater legitimacy of the insurgent forces, as oppositors to the government.



Model 11. Impact of inequality on war

In spite of this loops we have additionally the effect of education deterioration through the expenditure in a greater military capacity of the government (see Model 12), that makes one part of the Colombian population less educated, conducting to a greater income inequality (prepared Colombians have a higher wage that those Colombians with less education), inequality that could be exploited by armed groups in order to acquire a broader support on the population.



Model 12. Impact of war on education

This model allows the incorporation of political and social factors that interact with the economical aspects of an armed conflict as in the Colombian case. In spite of this, the model still has not the representation of several particular aspects of the Colombian conflict. For example education levels have a greater decrease on the presence of paramilitary forces, as well as the land inequity increases by their presence in comparison with left wing guerrilla forces (Sánchez, 2007).

6. ¿Military defeat or political inclusion?

The decisions that policy makers undertake are biased by these two trends on the comprehension of the civil war. In the particular case of Colombia, we must consider the complex interactions between grievances, unfulfilled needs, opportunistic behaviour and the historical and political context in which the conflict has “evolved”.

The conclusions and the understanding of the problem will depend on the model we use to understand the Colombian conflict.

A policy aiming at an economical debilitation might help to weaken or even to defeat an insurgent group, but it will not end the grievances that caused and are caused by the war, the so called “structural causes” (IEPRI, 2006). For these reasons, actions undertaken by the Colombian government such as the reception of economic resources from exceptional taxes such as “el impuesto al patrimonio” and external aids like in the plan Colombia, can improve the government capacity to face armed groups, but at least that an integral policy will be formulated, in the future we might see the emergence of new groups, or the rebirth of formerly defeated groups.

A simple oriented policy cannot be formulated, because at least that the question around the objective of the armed groups (profit seeking or ideology, or even both) will be answered clearly, we can not affirm that the armed groups are politicians or investors in disguise.

In spite of these doubts, the Colombian conflict remains politically motivated and ideologically driven, but this does not neglect the importance of the economic factors as engines of the conflict (Guáqueta, 2003).

The FARC, the AUC and the ELN have argued that their fight is politically motivated, as a product of profound grievances, but actually these claims are less strong because of stronger armed forces, and a more open political system (Guáqueta, 2003). Regardless of these advances, some grievances have not been resolved yet, seeing in some cases a worsening.

For these reasons it is necessary to build a model that can be related more to the intrinsic nature of the Colombian conflict and their historical roots, in order to be more capable of formulating real policy recommendations that obey to the nature of this particular problem. Neither military solution nor political negotiation by itself is a good policy unless the system has been adequately studied.

Any policy should involve elements that affect the incomes of the armed groups as well as improves the well being of the population of the zones under control of the insurgency.

Political negotiation should be planned as a strategy that might involve all the actors involved in the Colombian conflict, this does not neglect the possibility of a first phase

military strategy, in order to make more feasible an agreement with the government. In any possible strategy there should be the space for a political inclusion and the resolution of grievances of the population.

7. Conclusions

Any policy proposed at reducing or ending the conflict in Colombia has to consider the interactions in which they are embedded, because ignoring these feedbacks might end in another example of a policy resistance.

The consolidation of state control in Colombia has improved the legitimacy of the government, but this presence has to go beyond the military presence. A wider political reform, a series of policies aiming at reducing the inequality created by the conflict, and a land reform that counteracts the problems formed by the war are needed. Otherwise any solution (military or political) will not be sustainable in the long term.

Policies aiming at a reduction of the amount of money insurgent groups matter, but they are not more important than policies aiming at reducing social and political grievances. In order to reduce the economical incentives to enter the conflict, the state has to: attack the financial institutions that support the illicit economies that fuel the war and reduce the corruption of the state (in order to prevent cooptation of regional governments by armed actors).

A further development of the causes strip model is needed, in order to have a better understanding of the relationships between the Colombian historical context and the war system. In particular it is needed to evaluate the implications of the war system on the development of Colombian population. Additionally the model needs to be developed in order to incorporate the different worldviews and interactions of the armed actors in the Colombian conflict, comparing their behaviours to the different theories that seek an explanation to this war.

A system dynamics model should incorporate not only government policies, it should as well incorporate guerrilla tactics, for example extortion strategies and how they might make initially that the population supports the armed groups, but in excess that strategy could make the population to oppose guerrillas. Also a model should incorporate other theories such as micro-foundations of war (Kalivas).

A system dynamics model is useful to map and represent mental models, but any representation must make explicit their possible biases and assumptions in order to allow a broader discussion on theories beyond their representation on a causes strip or in a stocks and flows diagram.

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