

METHODOLOGIES TO CALCULATE COST OF CONFLICTS IN THE COMESA REGION

**METHODOLOGIES AND FORMULAE FOR CALCULATING COST OF
VIOLENT CONFLICTS IN THE REGION**

BACKGROUND

COMESA embarked on a research project to develop methodologies for costing conflicts in response to a Decision by the Fifth Meeting of the COMESA Ministers of Foreign Affairs, which was held Kampala, Uganda in June 2004. The Decision specifically identified the need for COMESA to undertake a quantification study to assess the cost of conflicts in the region, with particular emphasis on the less obvious indirect costs. It was also found important that such an assessment would have to be done within a regional framework in order to ensure that certain regional factors that are not always easy to identify are also captured. These include such factors as the costs incurred to the neighboring countries that play host to refugees or the costs associated with insecurity that result from influx of small arms and light weapons into neighboring countries.

Following that decision, a review of literature carried out by the COMESA Secretariat in partnership with the International Development Research Agency (IDRC) identified a research gap in the area of costing conflicts, and particularly the challenges encountered in attempts to accurately assess indirect costs. The Seventh Meeting of the Ministers of Foreign Affairs that was held in Djibouti in November 2006 proceeded to adopt a recommendation to begin the exercise of quantifying costs of conflicts with the development of sound methodologies of costing conflicts. These methodologies could then form the basis for analysis for the larger quantification study.

DESIGN OF THE STUDY

The research to develop methodologies for assessing costs of conflicts was undertaken in three phases. The first phase involved the identification of a list of general “cost-elements” or “themes” and the evaluation of methods for costing each of the cost elements identified. This was done through a desk research and a lead research agency, the University for Peace – Africa was subcontracted by the Secretariat for the task. In their task, the lead research agency was charged to ensure that cultural factors are included in the analysis and to also ensure to use “gender-sensitive lenses”. The output of this phase was the production of a background document.

The second phase involved field research, which was undertaken in North Uganda by the lead agency. This involved focus group discussions and interviews targeted at government officials from various ministries and civil society. The objective of the field research was to complement the desk research by identifying any other themes that may have been overlooked in the desk research.

The final phase involved a validation exercise which was done through a workshop convened by the Secretariat in November 2007. The workshop, which was held at the the Mulungushi Conference Hall in Lusaka, Zambia brought together twenty-one top researchers from all of Africa. The group of experts (names appended at the last pages of this document) were tasked to improve the document by identifying gaps in the background document. This was done around four themes that were identified, including Economic costs, Social costs, political costs and Environmental costs.

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ABOUT THE COMESA PROGRAMME ON PEACE AND SECURITY

COMESA's active engagement in addressing the conflicts in the region dates back to 1999 due to concerns on what appeared then as widespread and persistent armed conflicts in the region. After a lengthy debate on the devastating impact of wars and conflicts on the COMESA integration agenda, the Forth Summit of the COMESA Authority, which was held in Nairobi, Kenya in May 1999 made a decision for formal structures and modalities for COMESA engagement on matters of peace and security under the article 3(d) of the COMESA treaty. The Authority mandated COMESA Ministers of Foreign Affairs to meet at least once in a year to discuss modalities for addressing peace and security and to also monitor and advice the Authority on promotion of peace, security and stability. The Authority also directed that the activities of the Programme would have to work within the framework of the African Union, hence build towards the Continental Peace and Security Architecture.

Recognizing the complexity of the conflicts in the region, the Authority further directed the COMESA Secretariat on the need for collaborative and consultative relationship between a wide range of stakeholders that include civil society, business community and parliamentarians. COMESA responded by setting up the structures for the engagement of other non-state actors that will effectively facilitate the employment of multi-track preventive diplomacy. These include the formation of a network of civil society and private sector organizations through a process of accreditation to the COMESA Programme on Peace and Security; and the recent establishment of a COMESA Inter-Parliamentary Forum.

During the Seventh and Eighth Meetings of the Ministers of Foreign Affairs that were held in Djibouti in November 2006 and in Nairobi in May 2007 respectively, the Ministers continued to construct the structure for the Programme. The Seventh Meeting recommended COMESA to consider establishing a Committee of Elders drawn from the COMESA Region, who would be chosen and deployed from the Office of the Secretary General for "preventive peace-making assignments"; while during the Eight Meeting the Ministers recommended COMESA to "put in place requisite systems, structures and programs to establish a conflict early warning and response system that will primarily focus on war economy". It was also during the Eight Meeting that the Ministers recommended a new strategic vision for the COMESA Programme on Peace and Security that would exploit the distinctive competence of COMESA which is regional integration and economic development. Specifically,

"COMESA should consider a new expanded strategic vision of implementing its mandate of conflict prevention by focusing its comparative advantage on trade and investment issues, especially looking at economic dimensions of conflicts such as trade flows in natural resource/ extraction industry and the development of good corporate governance and corporate social responsibility..."

Research work-undertaken by the Programme to-date:

- a) Research to explore the root causes of conflicts in the COMESA Region. Immediately after the decision was made for COMESA to formally get involved with peace and security issues, the Programme conducted a research to establish the root causes of conflict in the region in order to provide the Ministers of Foreign Affairs with information to make adequate policy decisions.
- b) Research to establish the functioning of National Parliaments in matters of Peace and Security. This audit is ongoing and it has the objective of establishing and or strengthening national and regional parliamentary peace and security committees in the region.
- c) Situation analysis reports: Annually COMESA conducts desk research on the peace and security situation in the COMESA region. This is done with the aim of informing the Meeting of the Ministers of Foreign Affairs to facilitate them as they deliberate on the modalities of peace and security in the region.
- d) Research to analyse trade flows of natural resources and other commodities out of the DRC through the Great Lakes and East Africa. The goal of the research was to come out with practical recommendations that can enhance sustainable use of resources of the DRC's natural resources in the interest of poverty reduction in the DRC and stability in the region.

Other activities undertaken by the department

- Conflict mitigation through Preventive Diplomacy: COMESA makes briefings to key personnel on conflict situations in the region for the purposes of preventive diplomacy.
- Involvement of civil society and private sector: COMESA has formulated rules and criteria for accrediting these non-state actors to the COMESA Programme for Peace and Security.
- Involvement of Parliamentarians in conflict prevention and peace building: COMESA Programme for peace and security has held training workshops for over 70 parliamentarians in the region on conflict prevention and management skills. While in 2005 the Inter-Parliamentary Forum for COMESA was established to enhance their role in conflict prevention and peace building.
- Trading for Peace: COMESA in conjunction with DFID and USAID is involved in a project aimed at achieving security and poverty reduction through trade in natural resources in the Great Lakes region.
- Elections observation: COMESA has been involved in elections observations in the region with the objectives of promoting good governance in the region.
- COMESA as a building block of the African Peace and Security Architecture has been involved in the development of various African Union (AU) projects such as the Continental Early Warning Systems (CEWS) and the Post Conflict Reconstruction and Development Policy. To that end, COMESA is also in the process of establishing its own early warning and response system that will strengthen the CEWS, and its own Committee of Elders for conflict prevention.

EXECUTIVE SUMMARY:

Analyses of costs of conflict in many places have been dominated by econometric measurements, which have tended to produce incomplete perspectives. Such economic reports focus on artificial dichotomies associated with military spending and loss of human lives. The effect of this approach has been the neglect of costs related to social and cultural losses incurred by groups many of whom are the most vulnerable in society.

Underlying the study is a belief that the views of populations – and especially those of victims of the conflict – have often been overlooked in the analysis of conflict costs. Consequently, many approaches have become disconnected from the needs and perspectives of the people most affected by the conflict, who are also likely to be key actors in any future peacebuilding and post conflict reconstruction processes. This study aims to amplify victims' voices regarding what constitutes costs of conflict and to interpret the social, cultural and political significance of popular perceptions regarding costs of conflicts.

Using face-to-face interviews and focused group discussions approach, the research team was able to come up with the broadest and perhaps the deepest understanding of what victims and perpetrators of violence perceive to be the true costs of armed conflict. This paper is built also on a comprehensive review of existing literature on costs of conflict, the combination of which has offered a conceptual framework for costing conflicts, which the research team hopes can be utilized for a broader study on costs of conflicts in the COMESA region. The research team has sought to analyze the perceptions of participants based on their specific social, cultural and political contexts. The analysis has been enhanced and embellished by a group of experts who had assisted in the refinement of this document. What is in this document, therefore is a product of both the initial preliminary exploratory research conducted in Northern Uganda and the experts meeting held in Lusaka from November 28-30, 2007. The outcome is the development of a conceptual and methodological framework for future research activities on costing conflicts.

As stated earlier, the study is exploratory with a view to conduct a larger, more comprehensive study that will interrogate various conflict situations in the COMESA region using the developed methodology from this study. The idea is to utilize methods of quantifying costs along various themes including but not limited to such themes as military spending, human costs, and loss in agricultural production, damaged infrastructure, capital flights, humanitarian aid and other opportunity costs. The study has sought to define methodologies to cost the various factors at the micro and macro levels and adopted a matrix structure. Such a structure seeks to ensure that cost elements are identified along thematic lines and along conflict systems. Efforts have been made, therefore, to quantify various aspects of conflicts including the indirect costs as closely as possible and hence bring to light and to perspective cost elements that are not always easy to

evaluate. The study has also sought to incorporate quantification of the various effects of costs related to refugees and increase in insecurity to neighboring countries; in addition to including a cost element that cuts across several themes.

The exploratory research discovered a diversity of opinion which highlights the complexity and highly localized nature of any conflict. It also discovered that victims' characterizations of their experiences of the conflict and their views on the cost implications are often times unique to particular individuals and groups. There is no universal view of what constitutes essential cost elements during conflict, although the research team did observe emerging perspectives on various cost elements and themes. Most notably, this research study shows that the participants broadly believe in the direct and indirect costs of conflicts. Additionally, there seems to be a general agreement in many costs related to post-conflict reconstruction; a cost element theme that for most participants is perhaps the most crucial, most expensive and perhaps most difficult to assess. The resultant costing matrix does not cover all the elements that ought to be included in any costing exercise, but rather provides a framework for consideration requiring further development and scrutiny.

Acronyms

AIDS	Acquired Immune Deficiency Syndrome
AM	Accounting Method
CBA	Cost Benefit Analysis
CCM	Contingent Choice Method
CGE	Computable General Equilibrium
COMESA	Common Market for Eastern and Southern Africa
CPIA	Country Policy and Institutional Assessment
CVM	Contingent Valuation Method
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
HDI	Human Development Index
HIV	Human Immuno-Deficiency Virus
HPM	Hedonic Pricing Method
IDPs	Internally Displaced People's
NPV	Net Present Value
Polity (IV)	Standard Political Science Index
PTS	Political Terror Scale
SAM	Social Accounting Matrix
TCM	Travel Cost Method

OPERATIONAL DEFINITION OF TERMS:

Conflict: Conflict is defined as the pursuit of incompatible goals by different individuals and groups.

Violent Conflict: The concept of violent conflict has been defined variously by various scholars. According to Johan Galtung, violent conflict can occur in three forms: Direct Violence, Structural Violence and Cultural Violence. Direct violence refers to physical, emotional and psychological injuries and the infliction of pain that is CAUSED by a specific person or groups of persons. Structural violence refers to deliberate policies and structures that cause human suffering, death and harm. It includes poverty, hunger, repression and social alienation among others; causing human misery and a reduction in the quality of life Cultural violence refers to norms and practices that create human suffering, discrimination and injustices. Religion, tradition, ideology are all possible sources of cultural violence.

Conflict Prevention: The anticipation of conflict that seeks to redress causal grievances to avoid the escalation of violent forms of conflict engagement or to curtail the re-occurrence of violent exchanges or some combination of these elements. Conflict prevention has predominantly been viewed as the task, if not the responsibility of international organizations to nation-states neutral to the given conflict. It however, does not necessarily rely nor should it depend solely on external parties¹.

Peacebuilding: Refers to efforts and interventions aimed at addressing the fundamental root causes of conflict. It includes efforts at addressing both the structural and cultural contradictions which underlie conflict situations with a view to strengthen out peacemaking processes; which will ultimately lead to sustainable peace. Peacebuilding is to a large extent equated with the construction of a new social environment that promotes a sense of confidence and improves conditions of life for the lot of people.

Post Conflict Reconstruction: Post conflict reconstruction is a practical need arising from the destruction of physical, economic and political infrastructure of a society that has experienced violent conflict. Post conflict reconstruction activities are designed to lay the foundation for social stability, harmony and sustainable development.

¹ UPEACE (2005) "Glossary of Terms and Concepts"; Second Edition, Switzerland.

1. INTRODUCTION

Since the end of the Cold War, a plethora of conflicts have plagued the African continent with devastating consequences on populations, economies and the environment. Many scholars have attempted to understand the fundamental causes of war and violence and the economic costs associated with conflicts. To achieve this understanding in a comprehensive way, many scholars, particularly economists have attempted to develop methodologies that would provide a credible framework for costing conflicts. In spite of these attempts, however, researchers and scholars have discovered that there is a persistent methodological gap for comprehensively calculating costs of conflicts that take into account all the costs including the indirect costs.

It is in this regard that the COMESA member states commissioned a research project that would in the first instance identify and develop methodologies for calculating conflicts in the COMESA region. The developed methodology is expected to be flexible enough to take into consideration the contextual complexities of its member states. The purpose was at best to develop methodology that could form the standard for calculating costs of conflicts in the region.

A major COMESA objective for this study is to reduce conflict, promote regional integration and stimulate economic growth. In terms of this specific study, the aim is to look at COMESA conflict settings from the onset of violent conflict to the post-conflict reconstruction phase.

Before 2000, the COMESA Programme for Peace and Security dealt with conflict on an ad-hoc basis. This study signifies a marked departure and COMESA needs to be complimented for its proactive stance towards peace and security in the region.

JUSTIFICATION:

Armed conflict is one of the greatest impediments to human development. It reverses human development gains, suppresses human rights and needs, and destroys livelihoods and all capacity for human advancement. Wars undermine economic development by negatively affecting investment and infrastructure. Conflict is a very costly endeavor as it results in loss of life and the destruction of material possessions to individuals, societies and states and the economy.

There are direct costs of warfare such as military expenditure. In addition, there are costs of the consequences of warfare during the conflict period, such as the loss of life, injuries, human suffering, destruction of infrastructure, and economic and social disruptions (indirect costs). There are also various opportunities

missed by investing in warfare such as economic development, lower rate of economic development leading to increased poverty, unemployment and general economic decline. There are also costs related to post conflict reconstruction such as the repair of infrastructure, rebuilding of state institutions and the rehabilitation of the economy.

Many scholars have highlighted the importance of knowledge about the costs of armed conflict in the sense that it assists in the implementation of policies intended to reduce the incidence of conflict or to prevent it from becoming violent. While estimating the cost of conflict is important to guide policies for reducing the incidence of civil wars, empirical studies on the costs of armed conflict are still scarce.

In recent years there have been major studies on the costs of civil war (Hillier, 2007, Wallsten, 2005, Collier, 1997; Knight et al, 1996; Staines, 2004). However, of these studies available on the costs of armed conflict, there are a limited number of studies which review the costs of conflict systematically and comprehensively. A review of empirical studies on calculating the economic costs of internal armed conflicts reveals that there are various costs associated with any conflict. The most direct and visible casualties of conflict are usually observed in countries where the conflict is taking place, although there are also costs for other countries, especially those within the region. According to Collier (2003:13f)², armed conflict is “development in reverse” because it weakens the economy and leaves a legacy of atrocities. Conflict further undermines the efforts of developing countries to reduce poverty and achieve sustainable development. As a whole the literature reviewed does not deal with all the various themes and indicators in a comprehensive way in relation to direct, indirect and opportunity costs. Furthermore, there is to date no study that focuses exclusively on regional organizations.

The reason for the interest in the study of conflict costs is that although such research constitutes a difficult, expensive and sometimes complicated task, it is necessary to be carried out in order to develop policy prescriptions that would be used to prevent conflict. However, any assessment of the costs of conflict is by necessity a process of estimation. In addition, many types of costs are not easily translated into econometric values, due to the difficulty in setting economic values to numbers of casualties and wounded, refugees and displaced persons. It is even more difficult to set values to the more diffuse social consequences of war, such as the breakdown of infrastructure, social chaos and loss of political authority. Furthermore, even if data were available, there is the conceptual problem of what to include in estimates of the costs of war.

This paper attempts to present some methodologies for calculating the costs of conflict cognizant of the challenges involved in the conduct of such an exercise. It

² Paul Collier et. al. (2003); “Breaking the Conflict Trap: Civil War and Development Policy” The World Bank.

is divided into the three sections and a conclusion. The first section deals with a review of literature regarding approaches to calculating costs of conflicts with a heavy focus on the identification, collection and verification of types of costs associated with conflicts. The second section examines various methodological approaches to calculating costs of conflicts; whilst section three attempts to draw formulae for the estimation of various conflicts cost categories and cost elements. A conclusion is found at the end of the paper that seeks to summarize the approach to costing conflicts.

SPECIFIC OBJECTIVES:

The study seeks to generate appropriate generic recommendations through selected country case studies which reflect the rich diversity of the COMESA region. The specific objectives of this study include the following:

- Identify themes and indicators that need costing in a violent conflict situation;
- Identify methods of quantifying themes and indicators;
- Provide a basis for a larger study in the COMESA region.

2. LITERATURE REVIEW

Conflict, especially violent conflict, can have devastating effects on communities at social, cultural, political and economic levels. Smith (1994) asserts that systematic violence including wars is a chronic development problem. He illustrates that during 1993, out of 79 countries at various stages of conflict, 65 of these were in developing countries. The former United Nation's Secretary General, Kofi Annan confirms this assertion, by stating that since 1970, more than 30 wars have been fought in Africa and that the consequences of these conflicts have seriously undermined Africa's efforts to ensure long term stability and prosperity³. The 1997 *Human Development Report* lists countries with the lowest Human Development Index, and of these countries, eight have suffered serious civil wars. In the COMESA region, member countries such as Mozambique, Ethiopia, Rwanda, and Burundi were engulfed in serious violent conflicts are among those countries listed in the report.

Stewart and Fitzgerald (2003) assert that it is important to assess the costs of war because conflict is a major source of poverty and underdevelopment. Analysis of costs of conflict will therefore pave the way for poverty reduction and development efforts. Second, it is important to measure the costs of conflicts because such assessments inform peacebuilding and post-conflict reconstruction processes. Third, analysis of the costs of conflict assists in the formulation and implementation of policies toward conflict prevention, management, resolution and transformation. Empirical data on costs of conflict can for example be

³ The Causes of Conflict and the Promotion of Durable Peace and Sustainable Development in Africa. Report by the Secretary General of the United Nations

incorporated into early warning and response systems and post-conflict program design.

In addition, understanding the costs of conflict subsequently transcends into an understanding of the costs of conflict prevention. According to Humphreys (2003: 21), “better estimates of costs of war are needed to produce estimates of the economic value of conflict prevention.” Along the same lines, Dorsey and Opeitum (2002:1) posit that measurement of costs of conflict presents empirical evidence which “might influence policy makers and donors to put more resources into the search for sustainable end to the conflict.” Lastly, an assessment of costs of conflict will disseminate relevant information for more cost-effective post-conflict reconstruction. It is imperative to have empirical data on the costs of conflict in order to influence policy and decision makers on the need for sustainable conflict Resolution and conflict transformation. This is because during the civil war, a country diverts some of its resources from productive activities to destructive ones.

The 2005 Human Security Report in its conclusion makes the firm assertion that conflict not only affects an economy but distorts political processes, affects life expectancy and destroys the entire social fabric of society. It is evident that conflicts affects institutional patterns, economic activity and social behavior at micro, meso and macro-levels, hence the imperative for designing methodologies that will be able to measure all aspects of the costs of conflict.

In a more recent study conducted by Debbie Millier (2007) in a on behalf of iansa (The International Action Network on Small Arms), Oxfam International and Saferworld, it was estimated that the cost of armed conflict to Africa’s development since 1990 constitutes 284 billion United States dollars. The calculated costs, according to the author’s admission, however, only considered the cost of armed conflict not armed crime⁴. The study also placed undue emphasis on small arms, production, distribution and proliferation. Such an approach misses critical cost elements that are necessary to provide a much more comprehensive look at conflict costs.

Based on the literature review and pilot study conducted in Northern Uganda, certain elements were found to be conspicuously missing from both cost categories and cost elements. These include the impact of a huge fiscal deficit of 12% of GDP, spillover effects of war to neighboring countries, especially Sudan, inflation, loss in tax revenues, lack of economic growth and development in Northern Uganda, low economic growth rate in the country, increased poverty, loss of livelihoods etc. On the social cost side, cost elements such as refugees and IDPs, incidence of diseases and injuries, food insecurity and malnutrition, children out of school, rape, profound emotional and psychological costs, civilian deaths, lack of education, poor health were elements ignored by various studies.

⁴ Africa’s Missing Billions, IANSA, OXFAM and Saferworld (2007), pg. 3. The study is lacking in a detailed analysis of various costs outside of the generally used econometric models.

Care International (2004), for example, carried out an economic study on the Northern Uganda conflict on behalf of Civil Society Organisations for Peace in Northern Uganda (CSOPNU)⁵ The study picked only a few items on economic and human costs. This makes the estimated figure of US \$1.33billion over 16 years to be a gross underestimation⁶.

The measurement of costs of conflict was rather narrow in the sense that it considered only economic costs for 16 years (1986-2002). It put a monetary value of US\$1.33 billion representing about 3% of GDP in that period. The NGO estimated the monetary value of the costs of conflict to be US\$100 million yearly. This is more than the annual budget of the Ministry of Health which is US\$95 million. With regard to the environmental cost elements the following were identified as missing: loss of flora and fauna, soil degradation, climatic change and resource scarcity especially land. The political costs not covered include, torture, suppression of civil and political rights, freedom of movement and association and corruption among others.

3. THE IDENTIFICATION OF TYPES OF COSTS

Conflicts and wars have many costs. However, what constitutes the cost of conflict remains unsettled. The components of costs of conflict can be categorized into direct, indirect and opportunity costs. However, the distinction between direct and indirect costs is often less precise and is used in different ways. Empirical studies attempt to measure mainly direct costs. A detailed description of various costs associated with conflicts is given below.

3.1.1. Direct costs of Armed Conflict

Direct costs are those that can be observed and counted. It is easy to observe and quantify the direct costs of conflict such as increased military expenditure, number of deaths due to war, number of those disabled due to war, displaced populations as well as destroyed infrastructure. Measuring direct costs of conflict has the advantage that it does not necessarily require the presence of baseline data before the conflict. Destroyed infrastructure, factories, machinery and farmland have some sort of price tag and can be summed up. While the direct costs may still sometimes be hard to measure and difficult to obtain data for, such costs are nonetheless easy to understand.

3.1.2. The Indirect Costs of Armed Conflict

Conflicts have a lot of hidden or indirect costs. Most elements of cost of conflicts are not observable. Indirect costs capture those aspects that are usually missed by direct measurements and yet they often result from war-induced effects. These costs are quite large and are crucial in assessing production capacity and

⁵ See Care International (2004)

future wealth of the country. For example, capital flights, brain drain, destruction of the environment have chain effects on the economy. However, the estimation of indirect costs is much more challenging because of a lack of direct “cause-effect” relationships between variables. Civilian deaths could result from factors such as lack of access to food and health facilities.

3.1.3. Opportunity Costs of Conflicts

During civil war, government diverts its resources from productive activities to conflict related expenditure. The diverted resources have opportunity costs in the form of lost production. What and how much could have been produced if conflict had not occurred? These are the next best alternatives missed by investing in conflicts. The opportunity costs have far-reaching economic, political and social consequences. This will have effect on economic growth and standards of living. Governments stop providing essential public goods such as health care, education, and policing. It is, however, very difficult to measure opportunity costs as some of them will occur in the far distant future and the estimation of loss in terms of output and economic growth is difficult to quantify. Table I below illustrates the three levels of categorization of direct, indirect and opportunity costs.

Table 1: The Dimensions of Costs of Conflict at Different Levels

	<i>Direct Costs</i>	<i>Indirect Costs</i>	<i>Opportunity Cost</i>
<i>Economic Level</i>			
<i>External Relations</i>	Foreign Debt	Capital flight of domestic capital, capital flight of foreign capital, discouragement of direct foreign investment (DFI); emigration of skilled work force, reduction of incoming tourists, less exports, less imports, less development aid, less humanitarian aid military aid.	Discouragement of new foreign investments, declining GDP, Emigration, less imports, development aid,
<i>National Economy Level</i>	Physical destruction of production capacity, infrastructure, factories, machinery, physical destruction of transport vehicles and routes, agricultural	Taxation by rebel and government troops, less investment, less developed human resources as less health expenditure, less education expenditure, missed education opportunities for	Discouragement of new foreign investments, declining GDP, Emigration, less imports, development aid,

	production capacity, physical destruction of land, death and injuries on work force, higher military expenditure, refugee care, land mines	combatants, less production of transport and physically limited intensive production, more production for short term profits, less long term investment	
<i>Individual Level</i>	Death, injuries and illness extra legal income	food scarcity, inflation ,emigration, forced migration	

3.2. Various Cost Categories:

3.2.1. Economic Costs of Conflict

Conflict has a variety of economic costs both as direct consequence of violence and as foregone choices in order to fund the conflict. Wars have in general, a negative impact on economic growth and domestic investment. A major way in which war affects the economy is through loss of GDP as productive factors - capital, land, labour, and entrepreneurship are destroyed and resources and manpower are redirected away from productive endeavors to purchase arms and pay troops. The most obvious costs involve the destruction of infrastructure, including roads, telephones, ports, airports, schools, housing, and hospitals thus making production difficult. The reduction in the rate of economic growth has consequences on social indicators like per capita income or human development. In addition, conflict promotes unemployment/underemployment, displaces skilled labour, dampens investor confidence, reduces production, creates parallel economies and subsequently spirals inflation.

War affects capital stock in a number of ways. First, internal conflict causes capital flight depriving the country of savings necessary for economic development. Capital flight is detrimental to capital formation, which is of crucial importance for economic growth. In addition, both domestic and international capital flight dissipates confidence and future economic growth. Investor confidence is very difficult to resuscitate and failure to address such a scenario often leads to negative or downward economic spiral.

There are also indirect costs in the form of what is foregone, as funds are diverted from other causes to fight the war. As the government diverts resources to finance war, this brings enormous opportunity costs – the loss from what the resources were previously earning and the loss from the destruction inflicted on the economy. The alternative earnings, were it not for the war are usually foregone (the opportunity cost). The first loss is reduction in the rate of economic growth. Looking at military expenditures as a share of GDP makes it clear regarding what could be foregone to support armed forces. In Uganda for example, the GoU had to reduce budget allocations by 23% from all ministries to

fund the war against the LRA in Northern Uganda⁷. Such a reduction meant that many ministries resorted to slashing delivery programmes that were initially earmarked for the provision of public goods and services.

Another cost of war to the economy is macroeconomic instability: high inflation, distorted money market (foreign exchange) and huge budget deficit. Civil wars bring a huge cost to an economy through fiscal deficit. Since fiscal policy is one channel through which war affects an economy, poor fiscal policy imposes costs on the economy. To cling onto power, there is a tendency for government to incur larger fiscal deficit in the short run.

The emigration of educated and skilled workforce is also a major problem. If skilled and educated labour leaves the country, the cost for their education will be an unproductive sunk cost for the country. In addition, armed conflict could be fatal for the tourist industry as the country is perceived as an unsafe destination. Furthermore, the damage to production capacity coupled with uncertainty of future production lead to serious drawbacks in exports. Less export is tantamount to reduced foreign currency inflow. However, during war, some imports are still deemed to be necessary, especially imports of weaponry. Increased military expenditure may result in larger foreign debt. Table 1-1 summarizes some of the costs to the economy that could be incurred as a result to armed conflict at the international, national and household levels.

Capital Flight

In addition, mass emigration of people from a country in conflict results in loss of human, social and financial capital. The fleeing people also take their movable assets with them. The impact of conflict on capital flight has been documented by Collier, Hoeffler and Pattillo (2002), who assert that before conflict, a typical country has on average 8.6 percent of its wealth abroad, a figure which will increase to 19.7 percent during civil war. Capital flight continues to be witnessed even when peace has been negotiated and Collier, Hoeffler and Pattillo (ibid) assert that it subsequently rises to 26.1 percent during the first post-conflict decade, a situation they label the “*war overhang effect*.”

When measuring the impact of conflict on social, human and financial capital, researchers can analyze the rate of emigration, the per capita incomes during the war as well as the investments abroad by locals. At the household level, researchers can use interviews to assess how families experience asset loss, employment loss during the war and after the war. A study in Uganda, conducted after the end of the civil war, indicated that at the household level, 60 percent of the respondents revealed that ten years after the end of the war, there were still unable to replace some of the asserts they lost during the war.

⁷ Accounts from a military officer (name withheld) who participated in one of the interviews held in Kampala.

Table 1-1 Economic Costs

	DIRECT	INDIRECT	OPPORTUNITY COST
ECONOMIC COSTS			
EXTERNAL SECTOR			
Import			
Export			
Trade balance			
Exchange rate			
External debt			
Foreign investment direct			
GOVERNMENT SECTOR			
Government expenditure			
Government consumption			
Government revenue			
Fiscal deficit			
Infrastructure/Public Goods			
BUSINESS SECTOR			
Investment			
Saving			
Capital Flight			
HOUSEHOLD SECTOR			
Investment			
Savings			
Consumption			
Disposable income			
Livelihoods			
TOTAL PRODUCTION			
GDP			
Agricultural Production			
Industrial Production			
Transport			
Tourism			
Commerce			
Growth Rate of GDP			
Per Capital Income			
Human Development Index			

PRICE LEVEL			
Inflation Rate			
UNEMPLOYMENT			
Unemployment rate			
Participation rate of labour force			

3.2.2. Social Costs:

Violent conflict leaves a legacy of a decayed social fabric at community and political levels. The larger percentages of human costs are due to the psychological suffering. Long-term injuries victims suffer from combat, rape, and torture affect individuals' ability to earn a living. They also often must deal with lasting psychological effects from the trauma suffered.

Human Costs: Death and Injuries

According to Hoeffler (2003), even after the war has stopped, the impact of conflict will still continue to be felt by civilians. The post-conflict environment is usually characterized by continued deaths, morbidity and maiming mainly due to the destruction of the health infrastructure and population displacements. Landmines, like infectious diseases, continue to inflict death long after the war has stopped. Even at war's end, landmines will continue to disrupt economic life of the country and cause delay in economic recovery. This legacy of landmines is a "negative capital stock" accumulated during conflict which impacts negatively on living standards. The risk from unexploded munitions even decades after a conflict is over is enormous and accounts for numerous cases of post-war disability.

Human costs are also often more subtle and widespread than combat related and civilian death. Conflict is detrimental to health and well-being in a number of ways. Aside from psychological effects, violence often leads to the destruction of medical facilities and the disruption of drug flows and medical supplies. Furthermore, conflict derails agricultural production both through loss of manpower and destruction of land. This inhibits food production and supplies, thereby leading to food insecurity and malnutrition. The consequences of these developments are particularly important for vulnerable groups such as women and children. Children's education suffers, and in the long run, such a scenario poses long-term costs for their future ability to earn a living.

Still in the health realm, the reproductive health of women, men and adolescents fertility levels will be disrupted during civil wars. However, the fertility rate increases among displaced people as the population replacement attitude crops in. People easily express their desire to replace those who have died.

A big indirect cost of war is the psychological damage. Mental sickness rises as more people become traumatized. There are a number of reasons; survivors of wars have lost family members, friends, husbands, and face hard life as refugees. This experience of trauma often has deleterious consequences because it does not end when the civil war stops, but continues long after the armed violence is gone.

Human Flight

Hoeffler (2003) reiterates that the most direct costs of conflict are the human casualties who are maimed, killed and who experience displacement. Violent conflict creates a culture of fear and an environment of uncertainty. This insecurity generates mass exodus of people who are afraid of being killed or being forcibly recruited to become combatants. Conflict often produces refugee flows, both within the country and across borders. In addition, forced migration during the war creates refugees and Internally Displaced People (IDPs). Refugees are often vulnerable to natural disaster and manipulation by combatants. Refugees also produce significant costs for neighboring countries and the international community in general, as they seek to avert a humanitarian disaster.

According to Hoeffler (ibid), nearly 86% of people currently receiving assistance from the United Nations High Commission for Refugees (UNHCR) are refugees and IDPs. The emigration of skilled and educated human resources into other countries or regions is also another impact of conflict. This causes brain drain and affects development initiatives in the conflict-ridden country. Although civil war would have given impetus to emigration, the rate of emigration may not subside quickly after the war. Even during peacetime, emigrants continue to leave the country to join their family members who would have emigrated during conflict.

Calculating the human flight costs of conflict is essentially straightforward. It is easy to count the number of displaced persons in IDP camps and to estimate refugee flows. However, keeping track of rates of conflict-induced emigration is not easy as other civilians cross the borders to become refugees in neighboring countries and other places abroad.

Table 2-1: Psycho-Social Costs

	DIRECT	INDIRECT	OPPORTUNITY COST
A. SOCIAL			
Norms/Culture			
Loss of social networks			
Orphan			
Cultural Objects and Protected Objects			
MORTALITY RATE			
Men			
Women			
Infants			
Combatants			
MIGRATION			
IDPs			
Refugees			
Urbanization			
MORBIDITY/HEALTH ISSUES			
Injuries			
Infectious diseases			
HIV/AIDS			
TB			
Malaria			
Malnutrition			
Reproductive Health of Women, Men, Adolescents			
B. PSYCHOLOGICAL Problems/Trauma			
Unfulfilled material expectations			
Unfulfilled emotional expectations			
Actual psychological disorders e.g. PTSD			
Significant alteration of: Perception Attention Attitudinal disposition Behavioral and personality factors			

Predisposition to psychological disorders			
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3.2.3. The Political Costs of Conflicts

As the state is weakened by war, government becomes dictatorial, democracy is eroded, human right abuses increase, corruption expands, torture becomes rampant and the rule of law is impaired. Regional states and sometimes a large number of states at the international level tend to distance themselves from the country at war, aid and other international cooperation activities are reduced or completely withdrawn. Withdrawal of regional and international economic cooperation isolates states in conflict and reduces their significance in the regional and international arenas. Opportunities for cooperation are lost with significant repercussions on political and social development.

In addition, post conflict countries are normally characterized by institutionalized war behavior, creation of war economies and prevalence of war structured forms of governance such as warlordism and parallel economies. This is often accompanied by many forms of direct and indirect violence such as increased rates of violent economic crimes. Furthermore, as the state is weakened by war, the quest for democracy is often curtailed due to erosion of governance structures and institutions.

Apart from the numerically measurable costs of conflict, there are quantitative and non-quantitative costs of conflicts which can hinder development. These include deterioration of health, education and social service provision, which in turn, have direct effect on economic development.

Table 1-3: Political Costs

	DIRECT	INDIRECT	OPPORTUNITY COST
POLITICAL COSTS			
Deterioration of Political Institutions			
Decreased Individual and Collective Freedoms			
Increased Polarization of Society			
High Levels of Dictatorship			
Risk of further War			

Torture			
Weakened Civil Society Participation			
Functioning Democratic Institutions			

3.2.4. The Environmental Costs of Conflicts

Conflicts often produce significant environmental challenges. War-related environmental problems add to existing pressures on the ecology. Environmental effects of conflict include impacts due to general breakdown of civil amenities such as lack of collection of municipal solid waste. In addition, chemical or biological weapons do long-term damage to the land as well. Refugee and IDP settlements are often associated with destruction of vegetation as fuel-wood is used as a source of energy.

Environmental degradation resulting from landmines and other ordinances of war often renders productivity from the land impossible, creating acute environmental scarcity and subsequent environmental conflict. This trend, if continued would prolong the cycle of violence, giving way to intractable conflict and further outflows of vulnerable populations as IDPs and refugees. In post-conflict reconstruction, the environment always receives the least attention. It becomes difficult to justify environmental protection when other more immediate concerns exist as a result of the conflict. Therefore, environmental damage from accelerated resource extraction may be severe.

Table 1-4 Environmental Cost

	DIRECT	INDIRECT	OPPORTUNITY COST
ENVIRONMENTAL COSTS			
Water (Pollution/Scarcity)			
Land Degradation			
Air Quality			
Natural Disaster			
Climate Change			
Land Scarcity			
Resource Capture			
Recreational sites			
Wildlife			

3.3. Cross Cutting Costs:

The current literature is silent on a theme of cross cutting costs. During the research experts meeting however, the need to create a theme that cuts across all categories was identified. Costs

related to the provision of professional services as well as gender dimension of conflict were among the most salient of cost elements in this category. In table 1:5 we have attempted to list some of the elements that are viewed as cross cutting.

Table 1-5: Cross Cutting Costs

	DIRECT	INDIRECT	OPPORTUNITY COST
Gender Dimension			
Gender Based Violence <ul style="list-style-type: none"> • Rape • Sexual Harassment • Gender Discrimination • Sexual Abuse • Commercial Sex Workers 			
Professional Costs <ul style="list-style-type: none"> • Legal Fees • Medical Fees; • Counseling Fees; • Trauma Healing 			

3.3.1. Gender Dimensions of Cost of Conflicts

Gender dimensions of costs of violent conflicts are cross-cutting issues. Forced displacements and demographic changes resulting from violent conflicts tend to disrupt gender relations and affect power equations between men and women. Displacement is often characterised by family breakdown, social destabilisation and significant shifts in gender roles and responsibilities for both women and men. The demographic changes have often led more women to become heads of households and to a redefinition of division of labour between men and women (El Jack, 2002).

The demographic composition is often such that the majority of people living in displaced people/refugee camps are women and children; a significant proportion of the women being widows. Many of the men might have been killed, maimed, engaged as combatants or have difficulties in finding employment in their new location leading to redundancy. The women are forced by circumstances to take up roles that were traditionally men's roles for which they were not socialised to handle. The added responsibilities women have in productive, reproductive and community work are often transferred to younger girls and boys within the family. In particular younger girls have to assume added responsibilities such as caring for children, the elderly, the sick, along with managing other burdensome domestic chores. Consequently they often miss out on schooling as they assume adult roles at a young age. The shift in responsibilities impacts on the welfare

and future of female household members. A father who once worked for the welfare of his family suddenly has no more useful function than to stand in a queue to obtain food or material assistance.

A mother almost certainly will have less time to nurture her children as she finds herself shouldering more responsibilities. Children find themselves shouldering responsibilities inappropriate to their age as they play critical roles in the survival of their families. Opportunities and space for play are limited (El Jack, 2002). Community social support systems that obtain during peace situation are hard to come by in encampments. This brings about a lot of psychological as well as social problems.

Abductions by armed combatants often lead to the phenomenon of sexual slavery of young women with the accompanying problems like children produced through rape, failure to access education, lack of reproductive health care and health care in general, lack of shelter, food clothing and parental nurture, care, and love, legal protection and other services. The formerly abducted young women often get so stigmatised and may in future fail to get marriage partners. The “rape children” present another problem. They are illegitimate children who would in future demand to know their fathers and are sometimes rejected by the community. During the illegitimate sexual relationships, it is the women who suffer most since they are the ones who get pregnant, have babies and have to care for them.

The phenomenon of forced displacement also often leads to incidents of unaccompanied children. Unaccompanied children are estimated to constitute 2-5% of refugees and displaced persons. Disruption is the basic fact of life for such unaccompanied children. Not only is the child forced to seek refuge in alien environment but many of the elements that his/her life depended on are gone (i.e. the father, the mother, the playmates, the pet, the toys etc.). The situation tends to be worse for the girl-child who may be subjected to sexual exploitation at an early age and perhaps child-motherhood or heavy child labour as house-helps (Children in War – UNICEF, 1993).

Child-motherhoods present a range of its problems. A girl who begins bearing children at an early age is prone to reproductive health complications since her body is not yet well developed for sustenance of pregnancy. The pelvis or the birth canal may not be wide enough to support delivery of a baby. In armed conflict situation, there may be limited accessibility to health facilities. Child mothers may therefore form a significant percentage of the maternal mortality in armed conflict.

In violent conflict, sexual and gender based violence is often a strategy used to break people down both physically and psychologically. Both women and men are targeted although proportionately more women suffer SGBV. Both men and

women may be victims of rape, increased HIV infections as well as other sexually transmitted diseases. Chris Dolan (2002) records cases of increased sexually transmitted infections (STIs) amongst men attributed to “rape” by the National Resistance Army in Northern Uganda. These cause physical and psychological damage to health, disruption of lives and loss of self-confidence and self-esteem. ACORD’s workshops on sexual violence confirm the difficulty of quantifying the extent of male rapes because victims are reluctant to speak out (Dolan, 2002).

SGBV may also manifest in the form of domestic violence, forced prostitution and sex work, the provision of sexual services to occupying armed forces in exchange for resources such as food and protection, forced pregnancy etc. Others distinct to women may be sexual mutilation, sterility, chronic reproductive health problems; marginalisation from family and community due to stigma associated with sexual abuse (UN 2002). Society marks the victims as “damaged goods” (Bennett et al, 1995:9). Women in war zones often experience physical and sexual abuse by male spouses who have been demeaned by the armed conflict and crippled by guilt and anger for having failed to assume their perceived responsibility of protecting their women that are openly sexually abused by the fighting forces (El Jack, 2002).

4. METHODOLOGIES FOR CALCULATING THE COSTS OF CONFLICTS

Cost of Conflicts: Methodological Issues

In this section we explore methodological issues in the estimation of the cost of conflict. There are a number of methodologies that can be used to measure costs of war. Each method is based on different assumptions with different outcomes. Therefore each methodology has some limitations. Some of the methodological issues are explored below.

4.1.1. Data Issues

There is a serious lack of data on the various cost of conflict. Data in conflict countries is hard to get even if they are available. But in most cases data are incomplete and unreliable. Because of lack of data estimates of conflict costs are not precise.

4.1.2. Definition of cost of conflicts

Perceptions of the cost of conflict are not clear cut. They are often affected by omissions. The choice of the elements of costs to include in the estimation of cost of conflict is often subjective. The definition of conflict or war is itself problematic. In addition, the indicators chosen for various types of costs of war

are arbitrary. Those set out to cost conflicts therefore need to put on multi-dimensional, interdisciplinary and multi-disciplinary lenses.

4.1.3. Dimensions of costs

What constitutes the cost of conflict remains unsettled.ⁱ The components of cost of conflict can be categorized into direct, indirect and opportunity costs. Empirical studies attempt to measure mainly direct costs. For example, direct human costs of war are classified by deaths; namely, combatant deaths, battle deaths and war deaths (Lanuna and Glesditch (2005). But a more accurate measure of human cost of war should as well account for indirect cost of death due to increased violence, diseases starvation. Furthermore, the investment, consumption, savings, taxes which these people would have paid if they had not died (opportunity cost) should always be factored in.

4.1.4. Duration

The duration of conflict, that is the question of when the conflict starts and ends affect its costing. It may be difficult to put an end date for the calculation of cost of war as the cost continues long after the war has ended.

4.1.5. Geographical spread

Estimate of economic and human cost of conflict is based on the locality where the conflict is taking place. However, there are spill-overs beyond the local to regional, national or global levels with cost implications/impacts. The quantification of local cost of war is an underestimate as the global cost often go beyond the scope of localized measurements. These global costs may include such issues like hard drug production and trade, capital flight, migration, human trafficking, AIDS and international terrorism. These are difficult to incorporate in the equation of cost of war.

4.1.6. Conflict traps

The issue of “conflict traps” complicates the measurement of cost of conflicts.ⁱⁱ More cost of conflicts are incurred as a country which has experienced war once is likely to have further conflicts. Do we therefore ignore the future risks of war connected to the first conflict? The risk of repeat conflict is so high as factors that cause or caused conflict often remains.

4.1.7. Opportunity costs

During civil war government diverts its resources from productive activities to conflicts. The diverted resources have opportunity costs – loss of production or rent – seeking. The government stops providing useful public goods such as

health care, education, and policing. One part of society is producing while another part is destroying. This will have effect on economic growth and standards of living. The estimation of loss in terms of output and economic growth is difficult to quantify.

4.2. MODELS FOR ESTIMATING COSTS OF CONFLICTS

There are a number of methodologies that can be used to measure costs of war. Each method is based on different assumptions with different outcomes. Therefore each methodology has some limitations. The methods for measuring the economic costs of conflict can be divided into two major categories. They are here labeled as the *accounting method* and the *modeling method*. The accounting method measures the direct and indirect costs of conflict based on economic theory and earlier empirical work. Typically you list empirical estimates of how large these costs are and sum them up. The indirect costs are sometimes based on simple or complex economic models. The modeling methods do not try to add up observed costs but rather to establish how the economy could have developed in the absence of conflict.

4.2.1. Measuring Direct Costs: The Accounting Method

The accounting method requires the collection of empirical estimates and summing them up. They are based on a bookkeeping approach. But this method misses the opportunity costs such as decreased tourist streams and non-realized foreign direct investment (FDI) which cannot be estimated without some sort of assumptions which always can be debated and questioned. They are not counterfactuals which all estimates built on models can be said (or accused) to be.

Since some of the indirect cost occurs in the future they have to be discounted to get the present value by the formula:

$$PV = \frac{(C_i)}{(1+r)^n}$$

Where $1+r$ = discount factor
 n = number of years
 r = discount rate
 PV = present value
 C_i = total indirect costs of year i

The use of discounting illustrates an important fact of economic life. A dollar in the future is less valuable than a dollar today. Economists use the concept of present value to compare dollar amount from different times. The present value of any amount in the future is the amount that would be needed today, given available interest rate r , to produce the future amount.

Thus the costs of a conflict using the accounting method can be obtained as:

$$\text{Cost of conflict} = \text{Direct costs} + \text{PV of indirect costs}$$

The indirect costs are sometimes based on simple or complex economic models. One approach towards assessment of these costs is to calculate production scenarios with and without conflict as a factor. The intention is to compare actual and "peace-adjusted" levels of development in individual countries. The question to ask is, "What would have happened had there not been a violent conflict?" Establishing what would have happened if there had not been conflict is the counterfactual world to which what actually occurred needs to be compared. The difference between the (peaceful) counterfactual situation and the (violent) actual situation can then be attributed to conflict. For example, if one wants to analyze the costs of conflict on agricultural production, one could compare average food production trends in conflict areas to the mean food production trends prior to the war. The differences between the means or averages should then reflect the costs of conflict on food production. Such a method roughly estimates a country's or region's departures from historical food production trends, thereby demonstrating the extent to which armed conflict has interfered with food production. This is basically an accounting method, and the implicit counterfactual world is that everything would have continued being the same had it not been for conflict.

The accounting method can be used to assess the impact of conflict in different realms including agriculture, industrial development and health, among others. Studies assessing the health impact of armed conflicts have documented the disruption of referrals, immunization programs, reduced supplies, and high turnover rate for health workers, among others. Measurements of the impact of conflict on health systems focuses on death rates, mortality rates, turnover for staff as well as availability of drugs and facilities.

The disadvantage of accounting methods is that they might miss a major part of the costs of conflict, especially qualitative dimensions. Accounting methods may fail to assess the non-metric measures of the impact of conflict such as psychosocial behavior, increased violent behavior, mental health problems, environmental degradation as well as disruptions in policy making. Another major disadvantage of the accounting method is that it is very difficult to pinpoint exactly what factor is resulting in the exceptional result - the conflict itself or other local and regional dynamics? It is often difficult to establish causality from such data. The rough calculations tend to lump together issues of armed conflict, bad weather, inflation, globalization and other social challenges such that it becomes difficult to confidently assert that armed conflict was responsible for the said changes. For example, drought and agricultural and relief mismanagements, apart from armed conflict, may affect production. In addition, data may not be very reliable. Even in peacetime, data collection and reporting techniques lack accuracy, miss variations within countries, and often fail to take into account

significant contributions of the informal economy, especially activity in parallel markets.

4.3. Measuring Indirect and Opportunity Costs: The Modeling Methods

The accounting method is inadequate for estimating the cost of conflict since it excludes opportunity costs which are connected with the country-wide and global effects. These “externalities” like the impact on economic growth rate, emigration, inflation and fiscal deficit are difficult to quantify without developing economic models. Therefore, modeling of the economy is required to capture these externalities. The modeling methods do not try to add up observed costs but rather to establish how the economy could have developed in the absence of conflict. Economists use models to understand the world and to help explain total production (GDP), inflation, unemployment, foreign trade, (imports and exports) and many other micro and macroeconomic variables.

4.3.1. Economic Models

The basic idea behind most of the modeling methods which estimate the economic costs of conflict is to take the difference between the actual production and the counterfactual production levels as the lost production.

Actual production - counterfactual production = loss of production.

The counterfactual production refers to the production being experienced when times are not normal (during conflict). Many studies consider the increase in military expenditure and compute its impact on investments. The computed change in investment is then used to estimate counterfactual economic production. Another way to model is to estimate growth from regression models based on time series data of earlier development. This can be augmented with techniques that take the economic development in neighboring or similar countries into account.

4.3.2 Models from Regression

One way of making an estimate of the cost is to make a regression analysis. Regression analysis is a statistical tool used to assess the relationship between variables. The researcher may seek to analyze the effects of war on the economy by estimating the quantitative effect of one variable upon the one they seek to estimate. A regression analysis can be done on the economy before the conflict and then the results are used to estimate what could have happened. The regression can also be based on what took place in other countries in the region. One can also base an estimate on the ranking within the region of the conflict economy before conflict. Regression can also be based on time series and different statistical methods can be used. Many forms of regression analysis basically build on the assumption that the future in some way will be shaped by

the same forces that formed the period upon which the regression is based. If then the context is structurally changed, it might be misleading to base an estimate on a context that longer exists. This problem is diminished if these structural changes are taken into account. A very general model that is based on the whole economy in an earlier period might not reflect the economics of a country in conflict very well, where the surrounding world has changed significantly. It seems better to try to incorporate such changes even if some crude assumptions have to be made.

4.3.3. Computable General Equilibrium (CGE)

CGE has proven to be a popular economic tool for modeling external “shocks” like conflict.⁸ Generally, micro and macroeconomic effects of conflict are ambiguous; hence CGE is required to assess the real cost of conflict. CGE is a multi-sectoral, multi-equation, representing a more realistic way the economy of a country works by incorporating market mechanism. CGE is also a useful instrument that explains the main relationships involved between endogenous and exogenous variables. It is also used to evaluate the effects of shocks like conflict quantitatively *ex-ante*.

Each agent is modeled according to certain behavioral assumptions; in particular it is common to assume optimizing behaviour of producers and consumers. Each market is either assumed to be competitive or non-competitive. For example, the labour market is assumed to have full employment or without full employment. CGE simulates equilibrium in the economy by equating demand and supply in all markets, giving equilibrium prices and quantities. Additionally, the government sector can be modeled as an agent that applies taxes, subsidies and transfers, including military expenditure etc. Military expenditure can be treated as shock. CGE can be used for forecasting or interpolation of growth patterns and development strategies. By altering parameters, CGE can deal with changes in exogenous shocks.

CGE is based on a rich data base called **Social Accounting Matrix (SAM)**. SAM is simply a square matrix with “social and economic” data containing data on production, income and expenditure among various sectors and agents in the economy. SAM contains four types of accounts namely; wants accounts, factors of production accounts; institutions account; and activities accounts. There is no data in an economy which is not represented in the SAM. CGE and SAM are normally linked. SAM supplies data to the CGE. The aim of linking CGE and SAM is to exploit the advantages of CGE by incorporating shocks. We can do a simulation based on exogenous changes such as conflict or any policy. These changes are first modeled in SAM and passed on to CGE.

⁸ DiAddario, S. (1997), “Estimating the economic cost of conflict: An examination of the two gap estimation model for the case of Nicaragua” *Oxford Development Studies* 25: 1

It is important to note, however, that in spite of the appealing and logical nature of CGE, it suffers from a number of limitations including the requirement of a large amount of data, expertise and expense.

4.3.4. Extrapolation

Under this method earlier economic trends are extrapolated. This can be done in different ways, with more or less taking account of changes in the world economy outside the country in conflict. If tourism everywhere is severely decreased because of terrorism and its consequences this can be handled by not simply extrapolating earlier trends but by introducing a reduction in the estimate based on the experience of other similar countries. One way of doing this is to take the average for other countries in the region.

4.3.5. Time Series Method

Time series is data collected consistently over a period of time. It can be used for forecasting or extrapolation and to detect trends among time series variables. Co-integration analysis of time series can tell us whether variables are moving together or not. This can be important in assessing cost of conflicts whether there is causality between variables. For example, if we have time series for economic growth and military expenditure, we can assess whether there is causality between the two time series – whether one Granger caused the other.

4.3.6. Cost-benefit Analysis

It is a technique that can be used to evaluate government projects and programmes. It encompasses an appraisal of a policy based on the costs and benefits of a project measured in comparable units within and across time. The advantage of cost – benefit analysis is that it allows for a quantitative comparison between cost and benefits. In addition, it can handle the unintended side effects or externalities of a policy. It is calculated based on the time value of money by discounting future costs and benefits to their present value. When the present value of benefits exceeds the present value of cost, the project should go ahead. The technique of cost benefit analysis is especially relevant in decision making processes and not necessarily a cost calculation method.

4.3.7. Simulating Economic Growth

The other method that can be used in assessing costs of conflict consists of simulating, through an econometric model, a country's economic growth. To the extent that a country departs from the path predicted by the model this can be accounted for by violent conflict or, alternatively, variables representing conflict can be built into the model and simulations can be made including or excluding the effect of these variables. The problem with this approach is that models of this type typically refer only to economic growth and, furthermore, are subject to serious theoretical and empirical criticisms.

4.3.8. Comparison with Other Countries

Another method is to compare the evolution of the country or countries with violent conflict to other countries in similar situations without violent conflicts. In this case the counterfactual situation is in fact the situation of the other (non-violent) countries. In this case there is less danger of excluding the effects of other variables if the other countries are similar to the one that is being analyzed or if (through an econometric exercise) the effects of these variables are calculated and isolated so as to avoid being confused with the causes or effects of violence. An increasing number of studies have been made recently applying this methodology, basically comparing countries that have suffered civil wars with those that have not. A limitation of this approach is that even if the conclusions apply to a wide set of conflicts as a whole; there may be specific cases, like those being analyzed in this paper, in which they do not.

4.3.9. Constructing Synthetic Regions

A synthetic region is a construct which incorporates essential characteristics of the economy in conflict. These characteristics are taken from other countries or parts of countries and together they determine how the synthetic region could have developed economically in peace.

In practice, a combination of these methods is advisable, trying to carefully take into account “other effects” in the case of the first accounting method, recognizing that the second method of individual country modeling may only be a very broad and tentative approximation of the actual costs of violent conflict, and identifying specific traits of conflict in particular countries so as to be able to determine if general conclusions resulting from the comparison of countries with violent conflict to those which are peaceful are applicable to particular cases.

5. FORMULAE FOR CALCULATING COSTS OF CONFLICTS

5.1. Formula Assumptions

Assumptions are an essential part of economic modeling. They enable economists to make predictions regarding social and economic phenomena. However, the outcomes of such predictions largely depend on the assumptions made.

Because measuring costs of conflicts are difficult and expensive and are based at best on estimations, the formulae proposed here have been developed based on the following assumptions:

- Different conflicts have different dynamics and therefore different complexities;
- The availability of data is skewed across different geographical boundaries due in part to the longevity of war and the functionality of state institutions;
- The authenticity of data is dependent upon methods and reliability of collection and expertise of data collectors;

- The credibility of data is also dependent upon the multidisciplinary and complementarity of approaches used;
- Data collection depends on the cooperation of the custodians of government statistical data; and.
- The availability of funds to conduct an extensive and comprehensive study.

Each item of cost identified in the table requires a unique formula or methodology to be employed so that a single cost figure or indicator of loss can be assigned to it. Most cost items can be estimated, although some are unquantifiable or difficult to quantify. Economists have made bold steps to assign value to human cost, political cost, social cost, and even for some cost elements going well into the future e.g. trauma. The various tables below cover (a) direct costs or budgetary costs in column one (present and future) (b) indirect costs as opposed to private costs in column two (c) opportunity cost. Columns four and five provide indicators and formulae for calculating cost.

5.2. Formulae for Measuring Economic Costs:

The formulae to be used in the estimation of economic costs are econometrics models (Macro-Econometric Model or Computable General Equilibrium - CGE). From these models we obtain estimates of parameters or multipliers to be used in the estimation of economic costs. Some of the estimates from these models used in other studies are reproduced here. For example, during war countries tend to grow at 2.2% more slowly; income would be 15% lower; absolute poverty would increase by 30%; capital flight typically is 20% more, and the income multiplier is 1.5 or 2.0. If we take a military expenditure of 2.2%, this would lead to a permanent loss of GDP of 2%. If we know the parameters or multipliers, the economic cost of war can be monetized through projection or simulation (Blimes, Stiglitz, 2006).

Besides these parameters and multipliers, we need further assumptions on inflation rate and discount rate since some economic costs will be incurred in the future. Remember, some of the effects of the war will be felt even twenty years or beyond from now. These costs have to be brought back to their present value (NPV) by the method of discounting. One way of calculating the costs of destroyed capital is to calculate the net present value of the lost production given a specific internal rate of return. However, it is argued that direct costs like the loss of human lives barely reflect the true costs of conflict because figures on combat deaths merely scratch the surface of the true cost of conflict.

For COMESA region the estimation of economic cost will combine direct costs, indirect costs and opportunity costs represented with the equation:

Total Economic Cost = Direct Cost + Indirect Cost + Opportunity Cost.

Whereas direct costs can be obtained from statistical data, indirect and opportunity costs can only be obtained through modeling methods.

Table 2: Economic Costs

	DIR ECT	INDIRE CT	OPPORTUNITY COST	Indicator	Formula
ECONOMIC COSTS					
EXTERNAL SECTOR					
Import				Decline in imports, change in export rates	Simulation, CGE, Regression
Export				Decline in imports, change in export rates	Simulation, CGE, Regression
Trade balance				Balance of trade deficits	Simulation, CGE, Regression
Exchange rate				Currency depreciation or appreciation	Simulation, CGE, Regression
External debt				Increase or decrease in external debt, debt service	Simulation, CGE, Regression
Foreign direct investment				Decrease in FDI	Simulation, CGE, Regression
GOVERNMENT SECTOR					
Government expenditure				Increase in military expenditure	Budgetary data,
Government revenue				Decrease in collected taxes	Budgetary data
Fiscal deficit				% of GDP	Budgetary, Simulation, CGE, Regression
Infrastructure/Public Goods				Decrease expenditures on the provision of essential public goods, infrastructure disrepair	Budgetary,
BUSINESS SECTOR					
Investment				Decrease FDI, crowding out	Budgetary, Simulation, CGE

Savings				Decreased corporate savings, decreased foreign exchange reserves.	Budgetary CGE, Macro-Economic model
Capital Flight				Outbound capital, % of GDP	Budgetary, CGE, Macro-economic model
HOUSEHOLD SECTOR					
Investment				Decreased investments (this could be a % of GDP)	Budgetary
Consumption				Decrease in consumption	Budgetary, CGE, Macro-economic model
Disposable income				Decrease in disposable income	Budgetary, CGE, Macro-economic model
Savings				Savings, (this could be a % of GDP)	Budgetary
Livelihoods				Food insecurity, loss of livestock, loss in agricultural outputs	Statistical data, CGE, Macro-economic model
TOTAL PRODUCTION					
				Decline in growth rate	Simulation, CGE, Regression
GDP				Decline in growth (falling output)	CGE, Simulation and Regression
Agricultural Production				Decline in productivity (output), % of GDP	CGE, Simulation and Regression
Industrial Production				Decline in productivity (output), % of GDP	CGE, Simulation and Regression
Transport				Decline in productivity (output), % of GDP	CGE, Simulation and Regression
Commerce				Decline in productivity	CGE, Simulation

				(output), % of GDP	and Regression
Tourism				Decline in tourism earnings	CGE, Simulation and Regression
Growth Rate of GDP				Decline in growth rate	CGE, Simulation and Regression
Per Capita Income				Decline in per capita income, increased poverty	CGE, Simulation and Regression
Human Development Index				Fall in HDI	HDI reports
PRICE LEVEL					
Inflation Rate				Rising consumer price index (CPI)	CGE, Simulation and Regression
UNEMPLOYMENT					
Unemployment Rate				Rising unemployment	CGE, Simulation and Regression, statistical data
Participation Rate of Labour Force				Decreased participation rate	CGE, Simulation and Regression
MONETARY/FINANCIAL SECTOR					
Money supply				Increase in money supply	Statistical data, CGE, Simulation and Regression
Interest rate				Increase in interest rate	Statistical data, CGE, Simulation and Regression

5.2.2. Social Costs

Various formulae have been used to assign value to social costs (Blimes and Stiglitz, 2006).

- Quality adjusted Life Years (QALY) - captures the “quality” of remaining life years. Can be used if people have no option for treatment either because hospitals have been destroyed during wars;

- Disability adjusted life expectancy (DALY) - takes into account life loss because of injury and years of healthy life lost to long term disability;
- Prevalence rate- HIV/AIDS infection during war;
- Number of women raped;
- Demobilized soldiers;
- Econometric method-mortality rate after 5 years of post-war is 11% higher than in the base year;
- Number of suicides of women of child bearing age- measure of brutality, trauma of rape.
- Value of statistical life (VSL) measures the value of death in terms of foregone earnings and contributions to the economy.
- Value of statistical injury (VSI) - can be used to estimate the cost of the wounded.

Table 2-1: Psycho-Social Costs

	DIRECT	INDIRECT	OPPORTUNIT Y COST	INDICATOR S	Formula
C. SOCIAL					
Norms/Culture				Decreased cultural values, collusion in cultural values	Observation
Loss of social networks				Decreased social networks	
Orphan				Reported	Statistical data
Cultural objects and protected monuments				Reported	Statistical data
MORTALITY RATE					
Men				Number of dead	Statistical data, simulation, CGE, regression, VSL
Women				Number of dead	Statistical data, simulation, CGE, regression, VSL

Infants				Infant mortality rates	Statistical data, simulation, CGE, regression, VSL
Combatants				Number of dead	Statistical data, simulation, CGE, regression, VSL
MIGRATION				Reported	Statistical data
IDPs				Numbers in IDPs / Number of internally displaced persons	Statistical data / Statistical data, simulation, CGE, regression
Refugees				Numbers in refugee camps / Number of externally displaced persons	Statistical data / Statistical data, simulation, CGE, regression
Urbanization				Movement from Rural to urban areas	Statistical data
MORBIDITY/HEALTH ISSUES					
Injuries				All groups	DALY
Infectious diseases				Prevalence rates	Statistical data
HIV/AIDS				Prevalence rates	Statistical data
TB				Prevalence rates	Statistical data
Malaria				Prevalence rates	Statistical data
Malnutrition				Reported	Statistical data
Reproductive Health of Women, Men, Adolescents				Reported	Statistical data
D. PSYCHOLOGICAL Problems/Trauma				Prevalence rates of:	Statistical data.

Unfulfilled material expectations				Depressive symptoms, Anxiety, Low libido, Lack of initiatives, Resignation to present state of things, Tendency to violent reactions, Suicidal tendency, and Tendency to substance abuse.	Analysis of co-variances (ANCOVA)
Unfulfilled emotional expectations					Regression
Actual psychological disorders e.g. PTSD					Multiple Analysis of Variance (MANOVA)
Significant alteration of: Perception Attention Attitudinal disposition Behavioral and personality factors					Critical Path Analysis
Predisposition to psychological disorders					

5.2.3 Political Costs:

To measure the extent to which conflict has affected social capital, the World Bank adopted the **Country Policy and Institutional Assessment (CPIA)**, a tool which assesses a country's scale of economic policy in four areas, namely macro, structural, social and public sector management⁹. Hoeffler notes that developing countries which are neither at war nor in their first decades of peace score 2.75 a score that is higher than the score of their counterparts who have experienced war, who score 2.52. The difference on the CPIA score reflects the extent of damage in social capital in areas such as trade policies, social policies and structural policies.

Overall, conflict leads to deterioration in political institutions. It is argued that countries in war have bleeding political institutions which are usually characterized by violence, coercion and non-participation. Still, on assessing the levels of political participation and democracy in social institutions, the **Standard Political Science Index (Polity IV)**¹⁰ can be employed. This is a ten-point scale which ranks countries according to the levels of democracy. According to Hoeffler, countries which are neither at war nor in the decade of post-conflict peace usually score around 2.11, while those experiencing conflict or in the first decade of peace score a low figure of 1.49. A related measure of social capital with regards to political institutions is the **Index of Political Freedoms (IPF)**

⁹ The CPIA is a diagnostic tool that is intended to capture the quality of a country's policies and institutional arrangements. CPIA measures the extent to which a country's policy and institutional framework supports sustainable growth and poverty reduction, and consequently the effective use of development assistance

¹⁰ This political science index is fully described by Jagers and Gurr (1995)

compiled by Freedom House.¹¹ This is a seven-point scale which is unlike other indices. A low score indicates that freedom has been slightly reduced while a high score reveals significant suppression of freedoms.

Decayed socio-political institutions for a country are costly because these serve as precipitants for further war. According to Collier and Hoeffler (2002a), a country with a civil war legacy is more likely to plunge back into another civil war. This is because war leaves a legacy of violence, polarization, impunity, trauma and bitterness on various parties. The level of trust among people can also be qualitatively assessed. The lowest score (1) records that the majority of other people can be trusted and that there is an overall positive climate of trust in the country. The highest score (5) indicates that people are extremely cautious in dealing with others.

Conflict has social costs in the realm of human rights. To measure the level of respect for human rights after a war, researchers can employ the **Political Terror Scale (PTS)**.¹² This tool uses annual reports from Amnesty International and the US State Department to measure the human rights situation in individual countries. The higher a country ranks on the five-level scale, the worse its human rights record.

Table 2-2: Political Costs

	DIRECT	INDIRECT	OPPORTUNITY COST	INDICATORS	Formula
POLITICAL COSTS					
Deterioration of Political Institutions				Decreased provision of public goods	CPIA, Polity IV
Decreased Individual and Collective Freedoms				Repression	Polity IV, IPF
Increased Polarization of Society				Polarized societies	Polity IV,
High Levels of Dictatorship				Increased authoritarianism	Polity IV, IPF, PTS
Risk of further War				High levels of war posturing	
<ul style="list-style-type: none"> Human rights violation/abuses 				Increased numbers of tortured persons, lengthy	PTS

¹¹ Freedom House is an advocacy organization, championing political freedom, democracy and poverty reduction. For more information on the Political Freedoms Index, go to www.freedomhouse.org/ratings

¹² PTS was developed by researchers Linda Cornett and Mark Gibney and Matthew Dalton from the University of North Carolina.

<ul style="list-style-type: none"> • war crimes • crimes against humanity • genocide 				imprisonments without trials	
External intervention					PTS
Corruption					PTS
Resource capture					PTS
Costs of peace process					PTS
Weakened Civil Society Participation				Political apathy	IPF
Functioning Democratic Institutions				Non-functional state institutions, lack of civil society participation	Polity IV

5.2.4 Environmental Costs:

There are a number of methods that can be used to estimate environmental costs. The problem arises because there are no market for environmental elements. Therefore they do not have market values. But we can create hypothetical markets for environmental elements.

There are a number of methods for creating market values for non-marketed elements; one is the contingent valuation method (CVM), two contingent choice method (CCM) and three, trouble cost method (TCM) and lastly hedonic price method (HPM) (Hansley, 1997).

5.2.4.1. CVM

It simulates values through a survey or questionnaire and this forms the demand side of the market. The researchers offer a change in quantity or quality of a good at a given price. The respondent either accepts or rejects the offer. Two hypotheses are normally proposed; one the change in the environment has already happened and respondents are asked *compensating variations*- the minimum amount that would return the respondent to the original position. The second hypothesis considers that the change in the environment has *not* yet happened. They would be asked to give the *equivalent variation*- the maximum amount they are willing to pay to prevent the change. Compensating and equivalent variations are willingness to pay to prevent the change or to effect the change in the environment. This is the demand side which has to be estimated based on the questionnaire. A regression model (uses logit or probit to estimate the demand equation for the willingness to pay). This can then be translated into the cost of an environmental element which has been destroyed.

5.2.4.2. CCM

It is similar to CVM. It is also called choice experiment or pairwise choice. It is also based on questionnaire and survey method. A set of options called alternatives containing attributes of that environment are offered to the respondent and the respondent puts money value on the various attributes. The information then is used to measure econometrically the *marginal value* of the attributes. A conditional logit model (regression) is specified and estimated for choice data using maximum likelihood approach. The estimated co-efficient is used to estimate willingness to pay which will give us the cost of the destroyed environment.

5.2.4.3. TCM

It is used to estimate values associated with eco-systems particularly recreation sites. The basic assumption is that the amount of money people are willing to pay to visit a place represents the “price” of that recreational site thus people’s willingness to pay is based on the number of trips that they can make at different travel cost. This is analogous to estimating people’s willingness to pay for marketed goods based on quantity demanded at different price. The major steps are:

- Select the environmental or recreational site.
- Collect data from visitors.
- Calculate visitation rates.
- Calculate average rate of round trip, distance and time.
- Construct a demand function.
- Estimate demand function using regression analysis.
- Use result from regression to construct demand curve.
- Estimate total economic cost of that recreational site by calculating consumer surplus which is the area under the demand curve.

The merits about TCM are that it is based on empirical technique, actual behaviour, relatively inexpensive and it is easy to interpret. It also suffers some limitations such as respondents are expected to respond to changes in travel cost which may not be the case. In addition, the results may be affected by the statistical method used.

5.2.4.4. HPM

This is an indirect way of putting value to damaged environment by looking at values of other assets. For example, if we want to assess the cost of noise around the airport, we use the price of houses around the airport.

Table 2-3: Environmental Cost

	DIRECT	INDIRECT	OPPORTUNITY COST	INDICATORS	Formula
ENVIRONMENTAL COSTS					
Water (Pollution/Scarcity)				Pollution and scarcity	Contingency valuation method (CVM), Contingency Choice Method (CCM), Travel cost method (TCM)
Land Degradation				Soil erosion, land overuse	CVM, CCM, TCM
Air Quality				Increased carbon emissions,	CVM, CCM, TCM
Natural Disaster				Droughts, hurricanes, tornadoes, floods	CVM, CCM, TCM
Climate Change				Increased temperatures	CVM, CCM, TCM
Land Scarcity				Increased land scarcity	CVM, CCM, TCM
Resource Capture				Increased resource capture	CVM, CCM, TCM
Recreational sites				Decreased numbers of wildlife	CVM, CCM, TCM
Wildlife				Loss of animals and loss of revenue from tourism	CVM, CCM, TCM

5.2.5 CROSS CUTTING COSTS:

Formulae

Quantifying incidents of SGBV is a tall order. Violence is often considered a private issue. This renders it invisible. Both the legal and cultural norms have a tendency of considering violence not as a crime but as a family matter or as a normal part of life (WHO, 2001).

Since gender is a cross-cutting issue, various approaches may be used to estimate women and men’s suffering at the political, social, economic and at the household levels. The important thing is to have gender disaggregated data in employing the various formulae for calculating the costs of conflict be they political, social or environmental in nature wherever applicable. Accordingly, the following formulae already cited under social costs should apply.

- Quality adjusted Life Years (QALY) - captures the “quality” of remaining life years. Can be used if people have no option for treatment either because hospitals have been destroyed during wars;
- Disability adjusted life expectancy (DALY) - takes into account life loss because of injury and years of healthy life lost to long term disability;
- Prevalence rate- HIV/AIDS infection during war;
- Number of women raped;
- Demobilized soldiers;
- Econometric method-mortality rate after 5 years of post-war is 11% higher than in the base year;
- Number of suicides of women of child bearing age- measure of brutality, trauma of rape.
- Value of statistical life (VSL) measures the value of death in terms of foregone earnings and contributions to the economy.
- Value of statistical injury (VSI) - can be used to estimate the cost of the wounded.

Others methods of assessing/measuring gender dimensions of costs are the Human Development Index (HDI) or its inverse the Human Poverty Index (HPI) over time, Seasonal calendar, Harvard Analytical Framework (HAF) that covers Activity Profile by gender, Access and Control Profile, Influencing Factors and Checklist for Project Cycle Analysis. Another assessment tool is People’s Oriented Planning Framework (POP) that covers Refugee Population Profile and Context Analysis, Activities Analysis, Use and Control of Resources Analysis (Candida M, Innes S, Maitrayee M, 2002). Prevalence rates and reported cases of the various cost items will constitute indicators.

Table 4:1 Gender Dimensions of Cost of Conflicts

	DIRECT	INDIRECT	OPPORTUNITY COST	INDICATORS	Formulae/ Assessment tools
SOCIAL COSTS					
MORTALITY RATE					

Men				Number of dead	Statistical data, simulation, CGE, regression, VSL
Women				Number of dead	Statistical data, simulation, CGE, regression, VSL
Boys				Number of dead	Statistical data, simulation, CGE, regression, VSL
Girls				Number of dead	Statistical data, simulation, CGE, regression, VSL
MORBIDITY/OTHER SOCIAL PROBLEMS BY GENDER					
Infectious diseases/injury				Prevalence rates by gender	Statistical data
HIV/AIDS				Prevalence rates by gender	Statistical data
TB				Prevalence rates by gender	Statistical data
Malaria				Prevalence rates by gender	Statistical data
Psycho-social Problems/Trauma				Prevalence rates by gender	Statistical data
The maimed				Prevalence rates by gender	Statistical data
Community social support system/social networks				Reported cases by gender	Statistical data
Rise of negative masculinities				prevalence	Statistical data Attitude measures
Level of poverty by gender				Prevalence rates by	HDI/HPI

				gender	
Malnutrition				Reported cases by gender	Statistical data
IDPs				Numbers in IDPs by gender	People Oriented Planning Framework (POP) (Refugee Population Profile and Context Analysis), Statistical data
Refugee				Numbers in refugee camps by gender	POP (Refugee Population Profile and Context Analysis), Statistical data
Education				Access, retention and performance rate by gender	Statistical data
SEXUAL AND GENDER BASED VIOLENCE					
Prostitution				Prevalence rates	Statistical data
Rape/"rape"				Reported cases by gender	Statistical data
"Rape children"				Reported cases	Statistical data
Defilement				Reported cases	Statistical data
Child-motherhood				Reported cases	Statistical data
Forced pregnancy				Reported cases	Statistical data
Sexual slavery				Reported cases	Statistical data
Domestic violence				Reported cases	Statistical data
Trafficking in women				Reported cases	Statistical data
Stigma/marginaliz'n from family and community				Reported cases by gender	Statistical data
Fall in quality of Reproductive Health of				Reported cases	Statistical data

Women, Adolescents	Men,					Quality of life
ECONOMIC COSTS						
Gender changes/reversal	role				Roles by gender	Statistical data Activity profiles, Seasonal calendar
Decreased Income					Earnings by gender	Statistical data
POLITICAL COSTS						
Repression						Polity IV, IPF
Decreased and Freedoms by gender	Individual and Collective				Repression	Polity IV, IPF

6. CONCLUSION

Conflicts impose enormous cost on the population, economy, political system and on the environment. Undoubtedly, studies have shown that billions of dollars are lost in any violent conflict. For the COMESA region, any member state that finds itself engulfed in a violent conflict situation would undermine its development imperatives. The proposed study could set the basis for a conflict preventive regime in the COMESA sub region. A comprehensive study of this nature would facilitate the realization of the broad COMESA objectives for regional integration, economic development and the promotion of human security.

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