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# SOUTH SUDAN: THE COST OF WAR

An estimation of the economic  
and financial costs of ongoing conflict

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This report was prepared by Frontier Economics in collaboration with the Center for Conflict Resolution (CECORE) and the Centre for Peace and Development Studies (CPDS).



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# CONTENTS

|  |           |
|--|-----------|
| <b>FOREWORD</b>                                      | <b>4</b>  |
| <b>EXECUTIVE SUMMARY</b>                             | <b>5</b>  |
| Key findings   | 5         |
| Recommendations in summary                           | 6         |
| <b>1 INTRODUCTION</b>                                | <b>8</b>  |
| 1.1 Background and context                           | 8         |
| 1.2 Objectives of this report                        | 8         |
| <b>2 APPROACH AND METHODOLOGY</b>                    | <b>9</b>  |
| 2.1 Overview   | 9         |
| 2.2 Macroeconomic costs                              | 10        |
| <b>3 RESULTS</b>                                     | <b>11</b> |
| 3.1 Macroeconomic costs for South Sudan              | 11        |
| 3.2 Macroeconomic costs - Regional effects           | 14        |
| 3.3 South Sudan's informal economy and regional ties | 15        |
| 3.4 Direct financial costs                           | 15        |
| 3.5 Wider costs                                      | 19        |
| <b>4 CONCLUSIONS</b>                                 | <b>20</b> |
| <b>5 RECOMMENDATIONS</b>                             | <b>21</b> |
| <b>REFERENCES</b>                                    | <b>24</b> |
| <b>ENDNOTES</b>                                      | <b>25</b> |

## FOREWORD



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Former Minister of Foreign Affairs, Minister of Defence, Prime Minister of the United Republic of Tanzania and Secretary General of the Organisation of African Unity.

The killings, destruction and mayhem afflicting the people of this newly independent African state are deeply distressing. It grieves many of us and shatters our hopes. At a personal level, achieving peace and stability for the people of South Sudan has been almost a life-time endeavour. As an ambassador of Tanzania in the early 1960s, and through my tenure as a Permanent Representative at the United Nations, as Minister of Foreign Affairs and Prime Minister, and later throughout my extended term as Secretary-General of the African Continental organisation, the South Sudan question has been of primary concern.

After all the efforts invested by Africa, it is disheartening to observe over the last year that thousands of South Sudanese people have been killed and almost 2 million have fled their homes to escape the scourge of war. Women have been raped and even children have been recruited as soldiers.

More painful is that this death toll and destruction has been the result of the comrades in arms of yesterday turning on each other to become the enemies of today. Should they continue on this course, the leaders of the warring parties will also bear primary responsibility for shattering the bonds that have united the people of South Sudan in their long struggle for freedom.

Despite great efforts by Africa and the international community to end this senseless war, the tragedy continues, at massive cost.

No monetary figure or economic projection can quantify the full human cost of this conflict. There can be no price tag on the suffering of South Sudan's people from displacement, famine and death. But it is possible to assess the direct economic costs by estimating the loss of productive assets and capital, the reduction in economic activity, and the domestic diversion from productive to non-productive activities. The costs are equally severe for neighbouring countries and the international community at large – including, in this case, the likely decline in formal trade flows with South Sudan's neighbours, and the cost of providing humanitarian aid and UN peacekeepers for years to come.

In this important report, Frontier Economics, in collaboration with the Center for Conflict Resolution and the Centre for Peace and Development Studies at Juba University, lay out the results of their sophisticated economic modelling to begin to calculate just what the direct economic costs are likely to be for the economy of South Sudan, its neighbours and the wider international community. Their conclusions are sobering.

Depending on the intensity of the conflict, the costs for South Sudan could reach a staggering range of between US\$22 billion and \$28 billion over the next five years. But if action is taken now to ensure peace is achieved in 2015 (rather than 2020), the international community, particularly Western donors, could save about US\$30 billion by reducing expenditure on peacekeeping and humanitarian assistance. This scenario would also mean that the neighbouring economies of Ethiopia, Kenya, Sudan, Tanzania and Uganda could collectively save US\$53 billion.

Elsewhere in Africa, bitter rivals were able to overcome their differences to establish governments of national unity and tackle the root causes of conflict. I firmly believe that it is possible for political leaders in South Sudan, the region and the international community to work together to attain a negotiated and enduring solution to this conflict. But countries with leverage over the parties to the conflict – in the region and beyond – must lead the way.

By shedding light on the wider costs of the war, it is my sincere hope that this report will focus the minds of political leaders on the stakes of failing to bring immediate and lasting peace to South Sudan. When compared with the potential cost of continued conflict, maximal efforts towards a negotiated political solution to this conflict seem a small price to pay.

## EXECUTIVE SUMMARY

The conflict in South Sudan since December 2013 has devastated the lives of the majority of South Sudan's people. It has killed tens of thousands, placed nearly a third of the population at risk of famine and ravaged key parts of the country. The conflict has been brutal: killings, rape, forced recruitment of children, mass displacement and the destruction of livelihoods. It has left open wounds that will take decades to heal.

The economic costs of the conflict to date are substantial, with a projected drop of 15% in South Sudan's GDP for 2014.

This report looks forward from January 2015 to quantify the additional economic costs that would be incurred by South Sudan, other countries in the neighbouring region, and the wider international community, should the conflict continue.

By viewing the conflict through this economic lens, the findings of this report likely understate the cost of war in South Sudan. The full effects of conflict, such as environmental degradation, the break-down of social cohesion, and the psycho-social trauma generated by sexual violence and child exploitation, are difficult to capture in their entirety in an economic cost benefit analysis. South Sudan can ill-afford the economic costs of war, but after decades fighting for independence from its northern neighbour, it is even less equipped to bear the heavy social costs of another generation growing up in a violently divided society. The longer the violence continues, the further it spreads, and the more insidious it becomes, the more difficult the task will be for South Sudan to undergo the kind of social, psychological and economic transformation needed to achieve lasting peace.

### Key findings

A central finding of this report is the need for early action. The costs of conflict to South Sudan, its neighbours and the international community are likely to increase at an accelerating rate the longer the conflict persists.

#### Key findings for South Sudan:

- If the conflict<sup>1</sup> continues for another 1 to 5 years, it will cost South Sudan between US\$22.3 billion and \$28 billion. If the conflict's effects are measured over 20 years to allow for flow-on effects, the loss is even greater: between \$122 billion and \$158 billion.
- The human costs of conflict – death, hunger and disease – also have significant longer term economic impacts. Just taking the effects of hunger on labour productivity could mean a further \$6 billion in lost GDP<sup>2</sup> if the conflict were to last another 5 years.
- South Sudan's spending on security could increase by a further \$2.2 billion were the conflict to last another 5 years.<sup>3</sup> The savings in military spending that would result from resolving the conflict within a year from now would allow South Sudan to meet the internationally recommended target of allocating 20% of spending to education.

#### Key findings for the region:

- The five countries considered in this report – Ethiopia, Kenya, Sudan, Tanzania, and Uganda – could between them save up to \$53 billion if the conflict were resolved within 1 year, rather than allowed to last for 5 years.
- Countries in the region, most notably Uganda and Kenya, may incur substantial financial costs relating to security needs. Figures reported for Uganda suggest that defence expenditure incurred as a result of the conflict is around double the government's projected capital investment budget for the health sector for the coming financial year, and close to the capital investment budget for education.<sup>4</sup>

#### Key finding for the international community:

- If the conflict ended within one year rather than 5, the international community could save nearly an estimated US\$ 30 billion by reducing expenditure on peacekeeping and humanitarian assistance.<sup>5</sup>

## Recommendations in summary

Persisting with the current level of political engagement is not a prudent option. Without a swift end to the fighting, South Sudan runs the risk of becoming a failed state, consumed by civil war. Worse still, it could become the epicentre of a full blown regional conflict.

Ensuring this is not the trajectory for South Sudan will require African leaders, with the full backing of the international community, to take swift and decisive action, and to sustain that action. The other crucial stakeholder in this effort is the people of South Sudan, who need to be empowered to be active participants in building the peaceful and prosperous democracy they have so long aspired to. There are no quick fixes to the problems that South Sudan faces. But if concerted action is taken now, the people of South Sudan can be supported to put their country back on a peaceful and more sustainable path.

The following recommendations prioritise the actions that are urgently needed to end the conflict in South Sudan and protect civilians who are affected by the fighting. These recommendations are presented in more detail at the conclusion of this report in section 4.

### 1. Establish an international contact group to help secure peace in South Sudan

- African leaders should consider using the African Union Summit in January 2015 to request the formation of a contact group by the AU Commission and/or the UN Secretary-General to facilitate coordination and discussion to ensure the protection of civilians and a swift end to the conflict.

### 2. Dramatically raise the pressure on the parties to the conflict to end the fighting and implement the resolutions of the 28th Extraordinary Summit of the IGAD Heads of State and Government on 7 November 2014 with clear timelines and benchmarks for full compliance with the cessation of hostilities agreement:

- The parties to the conflict should commit to an unconditional, complete and immediate end to all hostilities, and to the immediate cessation of the recruitment and mobilisation of civilians.
- Collective action by the IGAD region should be taken against any party responsible for any violation of the cessation of hostilities.
- If the parties to the conflict continue to violate the cessation of hostilities agreement and escalate the fighting, the IGAD region should take the necessary measures to directly intervene in South Sudan to protect civilians and restore peace and stability.
- Should it be required to implement the IGAD resolutions, the AU Peace and Security Council, the UN Security Council and the entire international community should render all possible assistance in the implementation of these resolutions in the interests of protecting civilians and securing a sustainable peace.

### 3. Insist on an inclusive approach to peace negotiations so that all South Sudanese people have a stake in their nation's future

- IGAD with the backing of the AU and the UNSC should continue to support the active participation of a broad range of South Sudanese religious leaders and civil society representatives in the peace process to ensure they have a central role in rebuilding their country.
- They should also secure the participation of the semi and fully autonomous armed groups operating in South Sudan so they are parties to any security arrangements and do not become spoilers.

### 4. Ensure accountability, reconciliation and healing processes take root in South Sudan

The culture of impunity in South Sudan fuels atrocities and must be tackled if the reoccurring cycles of violence are to end.

- Any peace agreement should exclude amnesty for those responsible for serious crimes. It should require that during the Transitional Period South Sudan publicly commits to fair, credible criminal investigation and prosecution of serious crimes committed during the current conflict. The Government of South Sudan should request international assistance from the United Nations and African Union to establish a hybrid mechanism to try to the most serious crimes committed during the current conflict.
- Any peace agreement should also require South Sudan to establish a national body during the Transitional Period that will promote truth-telling, reconciliation and healing. Any mechanisms established need to involve people at the grassroots level, be culturally appropriate and be owned and driven by communities.
- The AU Peace and Security Council should publicly release the report of the AU Commission of Inquiry on South Sudan as soon as possible. This report should also be used as the basis for imposing targeted individual sanctions such as asset freezes and travel bans, as outlined in the IGAD resolutions of 7 November 2014.

### 5. Avert famine and meet the humanitarian needs of all civilians in need

The risk that famine might take hold in parts of South Sudan by March 2015 is high. According to the United Nations, South Sudan is already in a major malnutrition crisis. It projects that 6.4 million people will be facing food insecurity between January and March 2015 and \$1.81 billion will be needed over the course of 2015.<sup>6</sup>

- Given the scale of the need and the urgency, South Sudan, donor governments and humanitarian agencies must redouble their efforts to increase humanitarian assistance.
- They should fund specialised gender-based violence (GBV) and child protection programming.

- All parties to the conflict must protect civilians and ensure full and unhindered humanitarian access.
- The international community should support the UN peacekeeping missions in South Sudan (UNMISS) and Abyei (UNISFA) to reorient their focus, structure and staffing to fully prioritise the protection of civilians and human rights reporting.

## Recommendations for the medium-term:

### **6. Bring greater transparency and accountability to the management of oil and mineral resources and all government expenditure to help build the legitimacy of the state**

The Government, with the cooperation of the international community should urgently improve transparency and accountability in the management of mineral resources and government expenditures. This should include the wide dissemination of data relating to the oil industry as well as fiscal and financial data. Authorities should be encouraged to enact the *Petroleum Revenue Management Act*.

### **7. Once peace is restored, South Sudan will need support to develop and implement targeted recovery and development programmes**

All recovery and development programmes should be oriented to the needs and priorities of the people of South Sudan. They should result in more equitable distribution of public resources to reduce poverty and promote the emergence of a strong private sector; focus on investment in social and physical infrastructure that will help rejuvenate livelihoods lost during the war and promote economic growth; be gender sensitive; include effective security sector reform and disarmament, demobilization and reintegration programs; and engage the youth in productive activities.

# INTRODUCTION

## 1.1 Background and context

Violent internal conflict broke out in the Republic of South Sudan in December 2013 when long-standing tensions within the county's ruling party, the Sudan People's Liberation Movement (SPLM), boiled over into armed conflict in the nation's capital, Juba. The Sudan People's Liberation Army (SPLA) split between forces loyal to the Government (President Salva Kiir) and forces loyal to former Vice-President Riek Machar. The violence spread rapidly amongst security forces in Juba, engulfing whole neighbourhoods and resulting in hundreds of civilian deaths within days.<sup>7</sup> Much of the violence was spurred by perceptions about which ethnic group people belonged to, or which political faction they were aligned with. News of these developments spread quickly and retaliatory violence broke out in Jonglei, Unity and Upper Nile States, causing the SPLA to disintegrate.

The Sudan Peoples' Liberation Movement in Opposition (SPLM-IO) was rapidly formed under the leadership of Dr Riek Machar and its armed wing threatened to take over Juba. Arguably Juba remained under government control as a result of the quick intervention of the Uganda People's Defence Force (UPDF) in December 2013 at the invitation of the Government of South Sudan, as well as the support of allied militia groups.<sup>8</sup> Attempts to implement a cessation of hostilities were negotiated and signed in January 2014, but have largely proved ineffectual.

According to the United Nations, the consequences for the civilian population have been devastating. There have been attacks on hospitals, churches, mosques, and United Nations bases. There are reasonable grounds to believe that violations of international human rights and humanitarian law have been committed by both parties to the conflict. These include extrajudicial killings, enforced disappearances, rape and other acts of sexual violence, arbitrary arrests and detention.<sup>9</sup>

Almost 2 million people have been displaced by the violence. About a quarter of these people have fled to neighbouring Ethiopia, Kenya, Sudan and Uganda. About 100,000 people<sup>10</sup> have sought refuge inside UN bases and do not feel safe to return home. Although there is no official death toll, the International Crisis Group estimates the figure could be between 50,000 and 100,000 people.<sup>11</sup>

Reports suggest that the opposing sides are mobilising for renewed fighting with the onset of the dry season, which started in December 2014.

The combination of South Sudan's low level of agricultural productivity, human displacement through conflict, and poor transport infrastructure has increased the likelihood of a humanitarian crisis. Reports by aid agencies suggest that as many as 4 million people, or close to a third of the population, face serious food shortages and the risk of famine.

In economic terms, the conflict has had a pronounced effect on South Sudan. Projections by the International Monetary Fund

(IMF) suggest that real GDP will decline by around 15% in 2014.<sup>12</sup> Because much of South Sudan's economic activity is informal, and therefore not (or imperfectly) captured in formal national accounts, the true costs incurred to date are likely to be considerably greater.

The conflict has also imposed economic costs on neighbouring countries, notably Sudan and Uganda. Sudan's exposure lies mainly through the shortfalls in its share of earnings of South Sudanese oil production, and the budgetary costs associated with an influx of South Sudanese refugees. The bulk of the latter costs have been borne by the international community through the United Nations (see section 3.4.3 for more details). Disruptions to cross-border informal trade with South Sudan may also negatively impact food security in the border regions between Sudan and South Sudan.

The Ugandan authorities observed that GDP growth for the 2013-2014 financial year was 4.7%, which was lower than the projected 6%, and attributed this underperformance in part to the effects of South Sudan's conflict. A projected 30% drop in remittances from returning Ugandan workers is, on its own, estimated to have reduced Uganda's GDP growth by 0.2-0.3 percentage points.<sup>13</sup> Due to Uganda's military involvement in South Sudan, the conflict has also imposed direct budgetary costs through higher spending on security. Security spending for the financial year 2013-2014 was around 111% of what was budgeted (not all of this excess is attributable to the conflict in South Sudan), and, partly as a consequence, spending in other areas (water, transport and health, notably) was under budget.

## 1.2 Objectives of this report

The purpose of this report is to quantify the economic costs of conflict in South Sudan, in addition to those already reported, were the conflict to continue beyond 2014. Measuring the costs of conflict is of interest to policy makers since it provides some guidance as to the returns from investing in measures (mediation, peace-keeping) that can help to resolve the conflict. At the same time, it is readily acknowledged that the human impacts of conflict are not adequately captured through the narrow prism of cost-benefit analysis, and that there are a number of ethical principles that justify conflict resolution, irrespective of economic considerations.

The costs of conflict are those borne by South Sudan, its neighbours in the wider sub-region<sup>14</sup>, and the wider international community. As explained in section 2, these costs can take a variety of forms:

- Macro-economic costs through the lost value of production, as measured by reductions in GDP or lower-than-expected growth in GDP. We anticipate this category of costs to be borne primarily by South Sudan and its neighbours.
- Direct financial costs associated with security, peacekeeping and mitigating the effects of the conflict within South Sudan and the region. These are likely to be apportioned between South Sudan, its neighbours and the international community.



- Wider economic costs that are not (perfectly) captured by market formal transactions and hence are not adequately reflected in national accounts. These include impacts on the informal economy and adverse impacts on public goods, notably the value of lost personal safety, health, and environmental damages.

Not all of these costs can be quantified, especially those in the last category. Hence the focus of the quantitative analysis is on the first two categories, with qualitative information on the third category used, where available, to supplement the discussion.



Destroyed homes burn in Malakal, Upper Nile State, February 2014. Photo: Tim Freccia

## 2 APPROACH AND METHODOLOGY

### 2.1 Overview

Our approach follows that adopted in Frontier Economics (2010). The main building blocks of this approach are summarised in Figure 1 below.

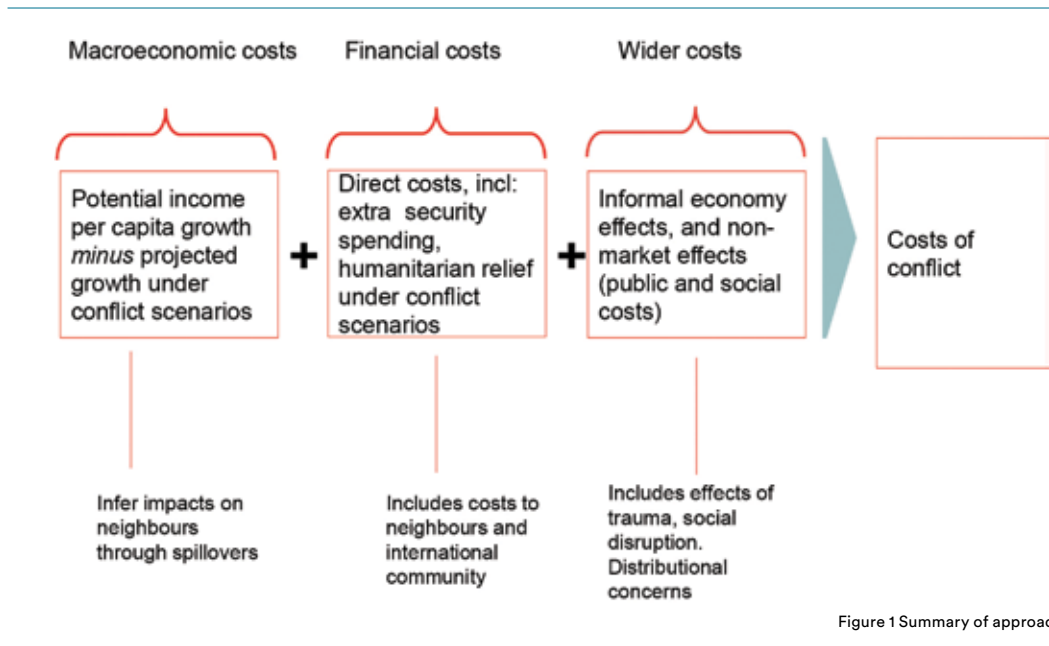


Figure 1 Summary of approach

The estimate of the cost of conflict involves a counterfactual analysis. That is, it involves comparing projected trends in the variables of interest (such as GDP) in the case of conflict with projections of what these variables would be *but for* the conflict. We refer to the latter as the conflict-free baseline projection. Concretely, the approach involves:

- Specifying a baseline scenario in which the conflict is resolved; and
- Hypothetical scenarios, which involve assumptions about the duration and intensity of the conflict.

For the purpose of this report, we consider the following scenarios:

- A baseline scenario in which the conflict is resolved speedily, allowing the resumption of economic activity and growth in 2015.
- A low-conflict scenario in which conflict, of the intensity seen in the period to date, resumes and lasts to the end of 2015.
- A moderate conflict scenario in which conflict lasts until the end of 2017.
- A high conflict scenario in which conflict lasts until at least 2019.

Some assumptions on the number of deaths and displaced people under the different conflict scenarios are required. For deaths, we can differentiate between those that are the consequence of fighting directly, and those that are the indirect consequence of fighting, particularly through disease (reflecting reduced access to health services) and hunger (reflecting reduced access to food). For direct deaths, we take the number of deaths observed to date as a result of conflict and assume that these will be replicated in every conflict year.

For indirect deaths, we draw on data that compare direct (conflict-related) deaths to total deaths in various conflicts in Sub-Saharan Africa. The average across all conflicts studied suggests a ratio of between 12 and 17 indirect deaths to every direct death.<sup>15</sup> Because the incidence of indirect deaths resulting from conflict is likely to increase over time, we assume that in the low conflict scenario, the ratio will be 3 to 1, increasing to 5 to 1 after three years under the medium conflict scenario, and finally to 12 to 1 in year five in the high conflict scenario.<sup>16</sup> We justify this assumption on the basis that as the conflict becomes more protracted, the cumulative impact on human health through disease and food insecurity, notably, will become larger. The implied number of deaths, as a proportion of the total population, are consistent with those observed in recent famine episodes in Sub-Saharan African countries such as Somalia.<sup>17</sup>

In the following sections, we explain the methodology we use to relate the baseline and conflict scenarios, respectively, to each of the three cost categories identified.



Civilians fleeing the fighting and seeking refuge, wait outside a compound of the UN Mission in Bor (December 2013). UN Photo/Hailemichael Gebrekrstos

## 2.2 Macroeconomic costs

### 2.2.1 Overall framework

We follow the methodology used in Frontier Economics (2010).<sup>18</sup> The approach follows that developed by Collier, which traces the economic damage caused by conflict through the following channels:<sup>19</sup>

- Destruction – loss of productive assets and capital, including both private assets and public infrastructure.
- Disruption – conflict and insecurity can reduce economic activity, by, for example, causing investors to refrain from investing or postponing investment. Disruptions to transport can increase the costs of commercial activities.
- Diversion – this includes diversion at home from productive to non-productive activities. For example, governments can switch spending from social sectors (such as education and health) and infrastructure, which are usually expected to raise the long-term rate of growth, to defence and security. Firms and households may engage in similar patterns of substitution. Diversion at home takes the form of capital flight i.e. the relocation of investment and financial capital outside the conflict zone. It also includes migration.
- Dissaving – firms and households may run down savings because their expectations for the future are so limited that they prefer to divert assets to meeting short term needs rather than longer term, more productive, ones.

The Frontier Economics (2010) study drew on Collier (1999), which found that for each year in which conflict was present, per capita GDP growth was 2.2 percentage points lower than the conflict-free counterfactual.

Collier and Hoeffler (2004)<sup>20</sup> found that post-conflict, a rebound effect (peace dividend) was also possible, meaning that growth would be 1.13 percentage points higher than in the counterfactual. This faster growth essentially reflects the fact that the economy is recovering lost ground i.e. it is returning to its long run trend rate of growth. The same authors also found that for five-year civil war, the average annual growth rate for neighbouring countries was 0.89 percentage points lower than the counterfactual.

## 2.2.2 Adapting the framework to South Sudan

These findings are average estimates based on a large sample of civil wars. While they provide a valuable starting point, they need also to be adapted to take into account the specificities of South Sudan. Because of the dominant role played by oil in South Sudan's economy (around 60% of GDP)<sup>21</sup>, GDP growth in any year is heavily influenced by oil production. The shut-down of oil production in 2012 is estimated to have reduced GDP by 45% in that year. Disruption in 2014 is reported to have reduced oil production by around a third – from 90 million barrels for the year to 60 million.<sup>22</sup> As already reported, GDP for 2014 is expected to decline by 15% in 2014. Clearly, the sensitivity of GDP to oil shocks suggests that a crucial issue is the use of appropriate assumptions about the extent to which conflict will disrupt oil production.

### Flow effects versus asset stock effects

The disruption effects described above are flow effects – oil production is disrupted during the conflict period, but is then expected to return to higher levels, as seen, for example, in 2013. In effect, the rate of oil extraction from the wells slows during conflict, but then returns more or less smoothly to higher levels once the incidence of conflict abates. A more serious form of disruption lies in the destruction of oil assets, including the burning of oil fields. Under such scenarios, the resumption of production following conflict is much more difficult, and consequently, the costs of conflict will be longer lived.

We assume that for each conflict year, oil production will be at the levels seen in 2014, or roughly 160,000 barrels per day. The fall in oil production in 2014 caused a one-off fall in GDP of approximately 15 percentage points. Following that one-off drop, we would expect that for each additional year of conflict the GDP growth rate would stabilise. The rate of growth would be inferred by considering what would be the rate of growth in a conflict-free situation, and adjusting this downwards by the percentage effect computed by Collier (1999).

In the event that conflict was to cease, we would expect oil production to increase to the levels seen in 2013, i.e. to 220,000 barrels per day. This is a conservative assumption, since capacity is estimated to peak at 340,000. A return to 220,000 barrels per day is expected to produce a one-off increase in real GDP in that year as the resumption of higher oil flows offsets the initial economic shock from the oil disruption seen in 2014. Whether the rebound fully offsets the initial shock of 2014 (i.e. of around 15%) depends on the level of oil prices. If oil prices are lower than in 2014, then the rebound will not fully compensate for the initial loss.<sup>23</sup>

Finally, we model the impact of asset destruction as part of the conflict scenario by assuming that oil production cannot increase to pre-conflict levels once conflict subsides. That is, we do not allow for a rebound effect at the end of the conflict.

## 3 RESULTS

### 3.1 Macroeconomic costs for South Sudan

#### 3.1.1 Baseline scenarios

As already observed, costs are reported as deviations from baseline scenarios. The baseline in this case involves the growth path followed by South Sudan if conflict were to cease by the start of 2015. There are considerable challenges associated with ascertaining what would constitute a plausible growth path for a new, fragile state such as South Sudan. We adopt as a starting point the projections for South Sudan contained in the IMF's World Economic Outlook database. These projections are available to 2019. Based on these, we develop the following scenarios:

- A "normal" baseline scenario, which follows the IMF projections, up to 2019, and then assumes real GDP per capita growth of 3.3% per year until 2035. This is a relatively conservative projection; and reflects a view that South Sudan's growth path could continue to be constrained by various sources of fragility, including weak governance, a degree of internal instability and regional tensions.
- A "peace and growth scenario", in which a secure peace is established, and the long run trend rate of real GDP growth per capita is double that in the normal baseline scenario described above i.e. around 6.6%. We find this assumption to be a justifiable projection on the basis of work done by the African Development Bank that suggests feasible growth rates in real per capita GDP in the order of 7%-8%.

#### 3.1.2 Conflict scenarios

We have modelled 5 conflict scenarios:

- **Low-conflict scenario 1:** where conflict, of the intensity seen in the period to date, continues and lasts until the end of 2015. From 2016, stability emerges and oil production reverts to pre-conflict levels at 220,000 barrels a day.
- **Low-conflict scenario 2:** where conflict again continues to the end of 2015, but oil production does not return to pre-conflict levels until the beginning of 2017.
- **Moderate conflict scenario:** in which the current levels of conflict continue until the end of 2017, but oil production does not reach pre-conflict levels until the beginning of 2018 due to ongoing instability.
- **High conflict scenario 1:** where the current conflict levels continue unabated until 2019 and oil production fails to reach pre-conflict levels until 2021, a year after the conflict ceases.
- **High conflict scenario 2:** where conflict, of the intensity seen in the period to date, lasts until the end of 2019. From 2020, oil production is assumed to be constrained by asset destruction and cannot reach the pre-conflict level seen in 2013 of 220,000 barrels a day. Oil production remains at that seen during the conflict period (160,000 barrels a day), until 2025 when oil production increases to pre-conflict levels.

We emphasise that while the modelling is based on conflict scenarios over the next five years, the results also take into account the fact that conflict will have an impact on the longer term growth path for South Sudan.

### 3.1.3 Results

The projected path for South Sudan’s economy under, respectively, the two baseline scenarios and the conflict scenarios is depicted below:

These results suggest that the costs of conflict increase rapidly with each added year of conflict, especially if prolonged conflict increases the probability of lasting damage through the destruction of assets, as opposed to disruption. The results also demonstrate that costs of conflict ought to be thought of in terms of foregone opportunities.

This is demonstrated by the magnitude of losses seen when conflict scenarios are measured against the higher growth scenario – the latter reflecting the growth opportunities available to South Sudan were it to more fully exploit its resources.

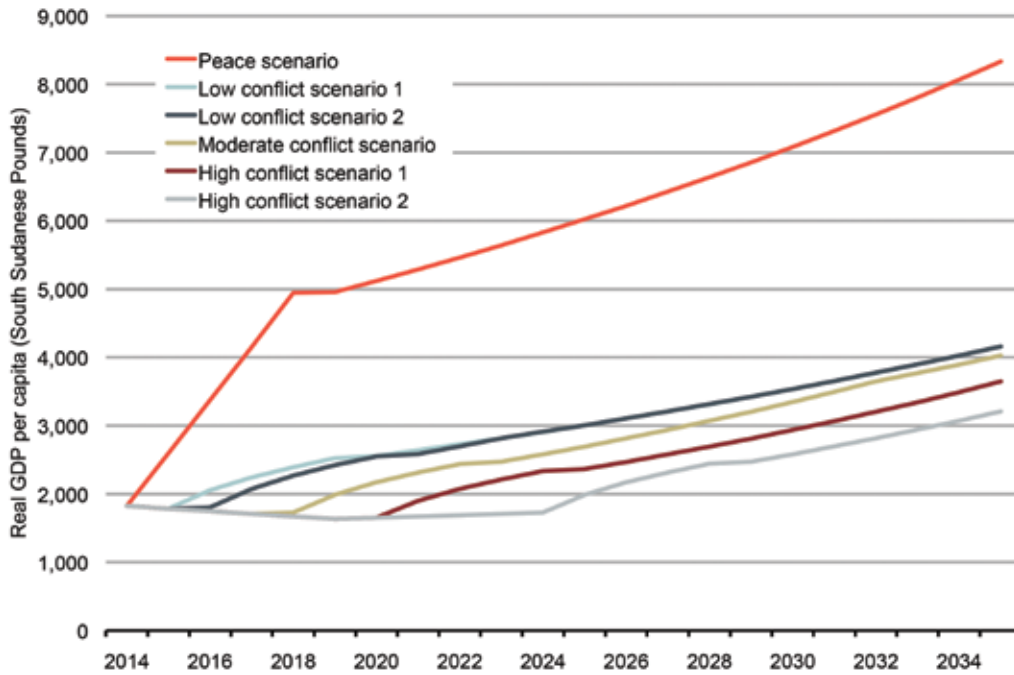


Figure 2 Projected growth paths 2015-2035

The estimated costs of conflict are represented as differences between each of the conflict scenarios and one of the baseline scenarios. The results are given in Table 1 and Table 2. The results are cumulative and are expressed in NPV (net present value terms).

Several factors suggest the possibility of significant downside risk i.e. the scope for the costs of conflict to be considerably greater than depicted in the modelling. These are described below.

**Table 1. NPV (net present value) of lost real GDP (compared to the 'baseline scenario')**

| Conflict Scenario | Billions of US dollars |          | Loss as percentage of 2014 GDP |          |
|-------------------|------------------------|----------|--------------------------------|----------|
|                   | 5 years                | 20 years | 5 years                        | 20 years |
| Low 1             | 1.8                    | 2.0      | 15%                            | 17%      |
| Low 2             | 3.4                    | 3.7      | 28%                            | 31%      |
| Moderate          | 6.7                    | 14.8     | 57%                            | 124%     |
| High 1            | 7.7                    | 27.5     | 65%                            | 231%     |
| High 2            | 7.7                    | 38.1     | 65%                            | 321%     |

Source: Frontier Economics

**Table 2 NPV of lost real GDP**  
(compared to the 'peace scenario')

| Conflict Scenario | Billions of US dollars |          | Loss as percentage of 2014 GDP |          |
|-------------------|------------------------|----------|--------------------------------|----------|
|                   | 5 years                | 20 years | 5 years                        | 20 years |
| Low 1             | 22.3                   | 121.8    | 187%                           | 1024%    |
| Low 2             | 23.9                   | 123.5    | 201%                           | 1039%    |
| Moderate          | 27.2                   | 134.6    | 229%                           | 1132%    |
| High 1            | 28.2                   | 147.4    | 237%                           | 1239%    |
| High 2            | 28.2                   | 158.0    | 237%                           | 1328%    |

Source: Frontier Economics

### 3.1.4 Sensitivities to debt dynamics

Oil receipts are expected to account for close to 70% of budgeted revenue for the financial year 2014/15, and have been as high as 98% in part financial years.<sup>24</sup> Shortfalls in oil revenues are typically accommodated through cuts in expenditure, the accumulation of domestic debt, and the accumulation of external debt. The question of expenditure cuts is addressed in further detail in section 3.4, in conjunction with the possible crowding out of social spending by security expenditure.

The accumulation of debt can have potentially severe effects on growth post conflict: domestic debt can crowd out domestic borrowing, reducing private investment. Over time, the accumulation of external debt (a debt overhang) can have negative effects on growth. Research on debt and growth dynamics of heavily indebted countries suggests that doubling the debt to GDP ratios, once these are in excess of around 45%, could reduce growth by half a percentage point per year<sup>25</sup>. South Sudan's debt to GDP is currently around 6.5%.

### 3.1.5 Sensitivities to humanitarian effects

As already reported, conflict will have an immediate social impact through lives lost directly as a consequence of conflict, and indirectly through the increased risk of hunger and disease. In addition to the seriousness of these issues in and of themselves, these humanitarian effects have a measurable macro-economic cost.

Considering solely the question of hunger, the macro-economic costs of hunger manifest themselves through several channels<sup>26</sup>:

- Hunger causes an immediate loss in work force productivity.
- Longer term effects operate primarily through the effects on human development of child malnutrition. These effects include increased mortality, which can be represented economically as a drop in the productive labour force. These effects also include longer term productivity impacts reflecting physical under-development (stunting) and lower education levels. There are also likely to be direct financial effects that reflect the higher burden of spending borne by education and health budgets.

The productivity effects associated with the costs of hunger alone are likely to be significant, given the measured importance of productivity growth in explaining economic performance in Africa.<sup>27</sup> There is little direct empirical research into the immediate impact of hunger on economic growth via productivity, on which we might be able to draw on to estimate the costs associated with hunger that arise within each of the conflict scenarios. It is also likely that these effects are already to some extent captured in the 2.2% elasticity of GDP growth per year of conflict reported in section 2.2.

More work has been done on the long run effects of hunger through the different impacts of child malnutrition. One report finds that costs through lost productivity (primarily), health and education costs, to be worth between around 2% and 16.5% of GDP, for a sample of Sub-Saharan African countries (Egypt, Ethiopia, Swaziland and Uganda).<sup>28</sup> Other studies cite figures of 3% and between 6% and 10% in lost annual GDP due to adverse productivity impacts.<sup>29</sup>

It is difficult to calibrate these results to the case of South Sudan. A rough estimate of costs may be derived in the following manner.

- We focus on the impacts via effects on child malnutrition i.e. conflict increases the risk of widespread food shortages, increasing the risk of malnutrition in children who during the conflict are in the first five years of their lives.
- This will have effects that will be discernible in future years as the cohort affected by malnutrition reaches the age at which it would join the labour force (assumed to be age 15).
- Under the low conflict scenarios, we model the effects as a 3% loss in annual GDP from 2025 to 2030. This seems reasonable in view of the estimates quoted above. **In net present value terms this amounts to an increased cost of around US\$ 1.2 billion.**
- Under the moderate conflict scenario, we model the effect as a 6% loss in annual GDP from 2025 to 2033. **In NPV terms, this amounts to an increased cost of around US\$ 4 billion.**
- For the high conflict scenario, we model the effects at a 10% loss of annual GDP from 2025 to 2035. **In NPV terms, this amounts to an increased cost of just under US\$6 billion.**

We emphasise that these results are additional to the ones reported in section 3.1.3. The total cost, taking into account the sensitivities modelled here, is found by adding the costs for each scenario to the relevant sensitivity modelled above.

## 3.2 Macro-economic costs - Regional effects

This section estimates the impact of South Sudan's civil war on its neighbouring countries. According to some estimates, if a country experiences a 5 year civil war, the country's neighbours will face a reduction in GDP of 0.89% annually over the same 5 year period.<sup>30</sup> This approach is used to estimate the potential consequences of civil war in South Sudan on its neighbours using the scenarios listed below.

We adapt this approach to the specificities of this conflict as follows:

- For Uganda, the onset of conflict led to the return of many Ugandan residents from South Sudan, and a corresponding drop in remittances. Total remittances to Uganda have fallen in the wake of the current conflict by a projected 30%, which is estimated to have reduced Uganda's GDP growth by 0.2-0.3%.<sup>31</sup> Because this effect has already happened, we do not model a future drop in remittances. Formal trade flows have reportedly been robust to the effects of conflict.
- No significant macro-economic effects of the conflict on other neighbouring countries have been reported to date. (By contrast, a number of neighbouring countries have incurred direct financial costs, reflecting an influx of refugees – see section 3.4.2).
- In keeping with the research described above, it is likely that significant effects will manifest themselves over a period of time. We therefore focus our modelling on the moderate and high conflict scenarios.

### 3.2.1 Scenario descriptions

- **Moderate conflict scenario:** where the impact of South Sudan's civil war is assumed to have a negligible impact on Ethiopia, Kenya and Tanzania, but a significant impact on Sudan and Uganda whose real GDP falls by 0.89% annually between 2015 and 2017.
- **High conflict scenario 1:** assumes that the conflict in South Sudan lasts from 2015 until 2019. For these 5 years of conflict, the regional impact of South Sudan's civil war reduces the GDP growth rates of its neighbouring countries by 0.89% a year. Under this scenario, the economies of Ethiopia, Kenya, Sudan, Tanzania and Uganda are all affected.
- **High conflict scenario 2:** assumes the conflict in South Sudan lasts until the end of 2019. From 2020, economic activity between South Sudan and Ethiopia, Kenya, Tanzania, Sudan and Uganda remains low with economic instability and uncertainty reducing the GDP growth rate by 0.89% a year until 2021. The conflict's impact on South Sudan's economic relations with its neighbours means that trade and regional economic stability are not restored to pre-conflict levels until 2021, when there is no further loss to GDP from conflict.

### 3.2.2 Results

Table 3 below shows the loss of GDP for each of the scenarios above from 2015 onwards (e.g. a 5 year scenario measures the loss in output from 2015-2019). Under each scenario, we assume that economic growth rates are higher in the immediate aftermath of the civil war with each country recovering their baseline level of real GDP after 10 years.

**Table 3. Regional impact, loss of real GDP**  
(US\$bn and as a % of 2014 annual GDP)

|                 | Moderate Conflict |                | High Conflict 1 |                  | High Conflict 2 |                  |
|-----------------|-------------------|----------------|-----------------|------------------|-----------------|------------------|
|                 | 5 years           | 20 years       | 5 years         | 20 years         | 5 years         | 20 years         |
| <b>Ethiopia</b> | 0<br>(0%)         | 0<br>(0%)      | 3.39<br>(6.8%)  | 9.30<br>(18.6%)  | 3.39<br>(6.8%)  | 15.07<br>(30.2%) |
| <b>Kenya</b>    | 0<br>(0%)         | 0<br>(0%)      | 5.69<br>(9.1%)  | 14.92<br>(23.8%) | 5.69<br>(9.1%)  | 24.33<br>(38.8%) |
| <b>Tanzania</b> | 0<br>(0%)         | 0<br>(0%)      | 1.71<br>(4.7%)  | 4.72<br>(12.9%)  | 1.71<br>(4.7%)  | 7.60<br>(20.8%)  |
| <b>Sudan</b>    | 0.77<br>(1.1%)    | 1.5<br>(2.1%)  | 1.01<br>(1.4%)  | 2.79<br>(4.0%)   | 1.01<br>(1.4%)  | 4.49<br>(6.4%)   |
| <b>Uganda</b>   | 0.94<br>(3.6%)    | 1.91<br>(7.3%) | 1.16<br>(4.5%)  | 3.18<br>(12.2%)  | 1.16<br>(4.5%)  | 5.18<br>(19.8%)  |
| <b>TOTAL</b>    | 1.17<br>(1.0%)    | 3.4<br>(1.9%)  | 12.96<br>(7.4%) | 34.9<br>(19.9%)  | 12.96<br>(7.4%) | 56.7<br>(32.3%)  |

Source: Frontier Economics

The loss of GDP calculated under each scenario uses the IMF WEO's GDP per capita projections as the model's counterfactual up to 2019, before assuming real GDP per capita growth of 3.3% per year until 2035.

As can be seen from the figures above, the overall cost of conflict in South Sudan to the neighbouring region<sup>32</sup> is approximately 32.3% of the region's total annual GDP under the 'high conflict scenario 2'. The potential consequences are particularly great for Kenya and Uganda, who are South Sudan's biggest trading partners.



Protection of Civilians site at the UNMISS base in Bentiu, Unity state, July 2014.  
Photo: Josh Estey/CARE

### 3.3 South Sudan's informal economy and regional ties

The estimates above are based on formal estimates of economic growth and trade between South Sudan and its regional partners. However, with 76% of South Sudan's households surviving on subsistence activities, informal trade is predominate and large amounts of economic activity will go unrecorded<sup>33</sup>.

Available data indicates that trade between South Sudan and its four most important regional trading partners – Ethiopia, Kenya, Sudan and Uganda – has grown significantly in recent years, with exports from Uganda to South Sudan alone estimated to have increased from \$US 60 million to \$US 635 million between 2005 and 2008.<sup>34</sup>

The current South Sudan civil war has had a particularly large negative impact on investment and trade between Uganda and South Sudan with trade between the countries stagnating in 2009 before declining in 2010 "due to the increased insecurity faced by Ugandan traders."<sup>35</sup> Trade fell further in the run up to the referendum due to growing instability and is likely to have dropped further since the onset of civil war in light of the sensitivity of cross border trade to changes in local security conditions.<sup>36</sup> According to Ngungi (2010), 77% of traders in South Sudan are from female headed households that are dependent on cross border trade for their primary source of income, meaning the fall in trade between South Sudan and Uganda is likely to affect the most vulnerable in South Sudan.<sup>37</sup>

These observations suggest that the simulations based on formal national accounts are likely to understate the true costs of conflict. They also do not take into account distributional impacts (as illustrated by the gender dimensions of informal trade).

Furthermore, with both Uganda and South Sudan landlocked, the significance of trade between these countries is vast for both economies, particularly as ongoing tensions and violence between Sudan and South Sudan restrict the latter's trade to the north. And with South Sudan bordering on the Central Africa Republic and the Democratic Republic of Congo, who have the lowest and second lowest GDP per capita in the world (IMF's WEO, 2014), trade with Uganda takes on even greater importance. According to Paul Collier and Steven O'Connell (2007), the average landlocked African country will grow by an extra 0.2% when one of its neighbours grows by 1%, while a fall in growth can have a similarly large but negative effect on the country's neighbours. This effect may be even greater for South Sudan and Uganda given the importance of both countries to the other's economy.<sup>38</sup>

## 3.4 Direct financial costs

### 3.4.1 Costs to South Sudan

The conflict has a two-pronged effect on South Sudan's public finances. On the expenditure side, the conflict will increase spending on defence and security relative to a peace scenario. There are also likely to be costs relating to humanitarian needs and rebuilding infrastructure post-conflict, though these are likely to be borne to a large extent by the international community (see section 3.4.3).

In projecting the incremental military spending associated with the conflict, we have taken into account that prior to conflict, military expenditure accounted for a significant proportion of total spending – as high as 28% in the 2012/2013 fiscal year. This reflects concerns relating to security in the post-independence environment. In order to ascertain the impact of the current conflict, we begin by observing that the outturn for military spending in the 2013/2014 budget was around 3.6 billion SSP (relative to an initial budget of 3.1 billion SSP), and the budgeted amount for 2014/2015 was just under 4.0 billion SSP. These figures amounted to around 8% of nominal GDP in 2013 and 11% in 2014 (the latter reflecting both the increase in military spending and the drop in GDP). These are high shares when compared to averages reported for other conflict countries: around 5.2% in countries during civil wars, 4.7% post-conflict, and 3.3% in times of peace.<sup>39</sup>

One simple way of estimating the incremental impact of the conflict on military spending is to treat this as equivalent to the differential between the figure of 3.1 billion budgeted for the financial year 2013/2014 (i.e. prior to the eruption of conflict) and the figure of 4 billion SSP for 2014/2015 (i.e. during the current conflict) – around 900 million SSP.

Using that approach, we find that under the low, medium and high-conflict scenarios, **incremental military spending amounts respectively to around US\$ 290 million, US\$ 1.0 billion, and US\$ 1.5 billion in NPV terms.**

The above assumes that military expenditure would simply revert to pre-conflict levels once conflict has abated. An alternative approach would be to assume that under a peace-scenario, absent conflict, military expenditures would converge to levels associated with those witnessed in average post-conflict cases (i.e. 4.7% of GDP). Under this scenario, in the absence of internal conflict, and assuming stability in the relationship with Sudan, military spending would fall progressively to 4.7% by 2018. We assume that, by contrast, in the high conflict scenario, military spending remains close to 10% of GDP for the duration of the conflict before reverting to 4.7% of GDP over a further 5 years. Using this approach, we arrive at a figure of **US\$ 2.2 billion in NPV terms.**

The conflict also has serious implications for South Sudan's revenue base. This is because of the country's heavy dependence on oil revenues (70% in the 2014-15 budget), which will be affected by disruptions to oil production. Shocks to the resource base, coupled with pressures on expenditures stemming from defence requirements, will constrain the allocation of resources to sectors such as education, health and infrastructure, all of which are essential in meeting human development needs, both directly and via their effect on stimulating long run economic growth. Budget data reveal that allocations to expenditure on education has varied between just under 4% and 7% of total public spending, which is far lower than the 20% recommended by the international community.<sup>40</sup> **The financial savings that could be realised by avoiding the medium or high conflict scenarios could help meet this target in the next fiscal year.**

Finally, it needs to be emphasised that resource shocks exacerbate existing fragilities affecting prudent fiscal management. The government has recognised that poor fiscal discipline has led to an accumulation of domestic debt, including a large stock of domestic arrears that has yet to be precisely quantified. In his budget speech, the Minister of Finance acknowledged that defence requirements would be financed through borrowings from the China National Petroleum Corporation against future oil earnings<sup>41</sup>. He also stated planned contributions to the Oil Revenue Stabilisation Fund and the Future Generations Fund, which under the terms of the Petroleum Management Act were to account for 25% of gross oil earnings, would be deferred in order to release funds for current needs.<sup>42</sup> These developments further illustrate how conflict diverts resources to less socially productive uses and undermines improvements to economic governance.



UNPOL enforces security measures at IDP camps in Juba. January 2014. UN Photo/Isaac Billy

### 3.4.2 Costs to regional neighbours

#### Sudan

The conflict in South Sudan imposes direct financial costs on Sudan in a number of ways:

- Under an agreement concluded between the respective authorities of Sudan and South Sudan in September 2012, and valid until March 2016, South Sudan is required to make payments to Sudan for oil transported through Sudan. The payments consist of processing fees, transportation fees and transit fees, all of which are calculated on the basis of a specified rate per barrel of production. The value of these payments is at risk through a drop in oil production. South Sudan has also agreed to a "finite payment" (described as the Transitional Financial Arrangement, or TFA) of US\$ 3.028 billion over the term of the agreement.
- An influx of refugees from the South is likely to create humanitarian needs, though it is understood that these will be met primarily through the international community. There may also be additional costs relating to security and the maintenance of law and order.

On the basis of the assumptions relating to oil production contained in this report i.e. a drop of around 60,000 barrels per day relative to pre-conflict levels, the financial loss to Sudan over the remaining term of the agreements (i.e. until March 2016) is estimated at around US\$ 300 million, based on foregone processing fees, transport fees and transit fees. This figure could be higher if the remainder of TFA payment is suspended because of force majeure. Beyond 2016, the financial loss would depend on successor arrangements to be negotiated between Sudan and South Sudan.



## Uganda

Uganda deployed troops in South Sudan in December 2013, following the outbreak of conflict. The costs of this deployment are not known with precision. A figure of US\$65 million was reported in June 2014<sup>43</sup> and troop deployment has been financed through the use of supplementary budgets.<sup>44</sup>

In October 2014, it was reported that Uganda had entered into an agreement with the South Sudan government to procure for the latter's use weapons and other military hardware.<sup>45</sup> The details of how this agreement would be implemented are unclear.

No definite timetable has been set for operations conducted by Ugandan troops in South Sudan. Working on the basis of annual costs in line with the figure of US\$65 million cited above – which is a conservative assumption as it reflects operations in the early period of the conflict – military intervention can be seen to place a significant claim on state resources. The annual figure is around double the sum projected for the government component of the annual development (i.e. capital expenditure) budget for health, and slightly more than the development budget for education.<sup>46</sup> The open-ended nature of the commitment entered into in October 2014 also raises the possibility of significant escalations in the direct financial costs to Uganda of the conflict.

Uganda has also been a major recipient of refugees from South Sudan. The United Nations High Commissioner for Refugees (UNHCR) estimates that nearly 125,000 refugees from South Sudan access humanitarian services in Uganda. This creates significant financial costs, which are likely to be largely borne by the international community. The UNHCR estimates that from 2011 to 2014, the costs associated with humanitarian responses to refugees from neighbouring countries increased from around US\$ 76 million per year to nearly US\$ 210 million.<sup>47</sup> Clearly, not all of this increase is attributable to the situation in South Sudan, but by taking the conservative assumption that half this increase is due to the conflict in South Sudan, an indication is given of the potential costs associated with prolonged conflict, and indeed of further escalation, with the bulk of these costs are likely to fall on the international community.

## Kenya

As observed in section 3.2, Kenya has substantial commercial interests in South Sudan. These reflect Kenya's role as a major source of South Sudan's imports, and the significant investments made by Kenyan enterprises in several services sectors, notably banking, communications and retail.

Kenya has already experienced an influx of refugees – estimated at around 44,000 by November 2014 – with further inflows expected. The financial requirements of these refugees for 2015 have been estimated at a little over US\$ 93 million. This is likely to fall primarily on the international community.<sup>48</sup>

Kenya is also likely to have concerns about the prospects of South Sudan becoming a failed state, especially in the light of the impact on Kenya of state failure in Somalia. A second failed state in the region is likely to increase the difficulty and costs Kenya faces in controlling insurgent activity.

Kenya currently has one of the highest levels of military expenditures in Sub-Saharan Africa. Data provided by the Stockholm International Peace Research Institute (SIPRI) suggests that since late 2011, when Kenya escalated its presence in Somalia, military expenditures rose by around US\$ 200 million in real terms.<sup>49</sup>

It is as yet unclear what position the Kenyan authorities propose to adopt in regard to the situation in South Sudan. The commercial and security interests cited above suggest that Kenya has a strong interest in securing peace and stability. Assuming this to be the case, the figures reported for Somalia can be interpreted as a guide to how much a prolonged intervention may cost if the conflict in South Sudan were allowed to escalate significantly. We project that under the medium and high conflict scenarios, Kenya would incur an extra US\$ 200 million in military expenditures.



An armed group carries away looted goods from Malakal, Upper Nile State, February 2014. Photo: Tim Freccia

## Ethiopia

Ethiopia's financial exposure to the conflict stems from an increasing flow of refugees from South Sudan, and its participation in peace-keeping activities in Abyei under the auspices of the United Nations Interim Security Force for Abyei (UNISFA).

The UNHCR reports the entry of just over 194,000 South Sudanese refugees in Ethiopia since the outbreak of conflict. The estimated financial requirements for refugee response in Ethiopia are estimated at a little under US\$ 345 million for 2015. These requirements are likely to fall mainly on the international community.<sup>50</sup>



A "Nuer White Army" fighter stands in a burning field near Akobo, Jonglei State, February 2014. Photo: Tim Freccia

### 3.4.3 Costs to the international community

South Sudan is currently one of the largest recipients of humanitarian assistance from the international community. The Global Humanitarian Assistance initiative reports that in 2013, South Sudan received US\$ 903 million in humanitarian assistance, making it the second largest recipient of such assistance after Syria. Nearly two-thirds of the population were classified as being in need of assistance.<sup>51</sup>

In early 2014, the United Nations declared South Sudan a level-3 emergency country – the highest emergency classification. Estimated humanitarian needs for 2014 have been valued at US\$ 1.4 billion<sup>52</sup> and now stand at \$1.8 billion.

In December 2013, the UN Security Council approved a temporary increase in the number of peacekeeping troops and police to respectively 12,500 and 1,323 (compared to 7,000 and 900). The total approved budget for United Nations Mission in South Sudan for the period from July 2014 to December 2015 is US\$ 580 million.<sup>53</sup>

The peacekeeping budget to December 2015 appears to have taken into account the likelihood of conflict occurring in that year. The budgeted humanitarian costs of US\$ 1.3 billion represent a 15% increase relative to the US\$ 1.1 billion foreseen at the end of 2013.<sup>54</sup> Global Humanitarian Assistance noted that the budget was likely to increase further.<sup>55</sup>

Consequently, we project expenditure for humanitarian purposes and for peacekeeping on the following basis:

- In the low conflict scenario, the UNMISS budget remains fixed for 2015. Budgeted humanitarian costs are estimated at just under US \$ 1.5 billion (a 15% increase on current estimates) for 2015, before reverting to pre-conflict levels of US \$1.1 billion. We assume that the peace-keeping budget is rolled out on the same terms as for the period July 2014 to June 2015, giving an incremental cost for the 6 months July through December 2015 of US\$ 290 million **Under this scenario, the incremental cost of the conflict would amount to just over US\$ 1.7 billion dollars in NPV terms.**

- In the medium conflict scenario, we assume that UNMISS maintains the increase in personnel it had agreed to for 2015. We then assume that UNMISS increases its annual peacekeeping budget by 25%, giving annual budgets of US\$725 million for each of the remaining conflict years.<sup>56</sup> We assume that the humanitarian budget will increase by 15% for each additional year of the conflict. The level of peace-keeping expenditure is assumed to return to pre-conflict levels, while humanitarian expenditures are expected to return to 2014 levels (US \$ 1.1 billion in 2014 dollars). **Under this scenario, the incremental cost of the conflict would amount to just over US\$ 8.7 billion dollars, in NPV terms.**
- In the high conflict scenario, we follow the assumptions of the medium scenario, before assuming that UNMISS increases its budget by a further 25% for years 4 and 5 of the conflict (to US\$ 906 million) before returning to pre-conflict levels. For humanitarian assistance, we assume that the budget will continue to increase by 15% per year. After conflict subsides, the budget remains at that level for three further years in view of the high humanitarian costs (in keeping with projected trends in indirect deaths, see the discussion in section 2.1) that are associated with prolonged conflict. **Under this scenario, the incremental cost of conflict would amount to US\$ 21.3 billion, in NPV terms**

The incremental costs to the international community exhibit a profile that is similar to that observed with the projected macro-economic costs i.e. they rise at an increasing rate, reflecting cumulative impacts, and the persistence of these effects through time.

The cost projections reported above are those incurred by the international community in South Sudan. However, as documented extensively in section 3.4.2, the flow of refugees to neighbouring countries will create acute humanitarian needs in these countries. The financial burden of meeting these needs is likely to fall primarily on the international community.

The UNHCR has projected costs of around US\$ 810 million for 2015, based on an influx of around 821, 000 refugees into the region since the beginning of the conflict. We can use these figures as a basis for projecting costs under the various conflict scenarios.

- In the low conflict scenario, once conflict abates, refugees progressively return home. We assume that half the refugee population returns in the year following the end of the conflict, and the remainder the year after. **Under this scenario, the NPV of costs is projected at US\$ 1.14 billion.**
- In the medium conflict scenario, we assume that the number of refugees in the region increases to around 1.6 million. Following the end of the conflict, the refugee population return to South Sudan progressively over a period of two years. Assuming the cost structure behaves in a roughly linear fashion, **the NPV of total costs is estimated at US\$ 6.3 billion.**
- In the high conflict scenario, a total of 2 million people are displaced into the wider region. Because of the scale of conflict, and associated problems related to famine and the destruction of infrastructure, South Sudan's diaspora return progressively over a period of 4 years following the end of the conflict. **Under this scenario, the NPV of total costs is estimated at just under US\$ 11 billion.**

**Table 4 Breakdown of total direct costs to the international community, Billions of US Dollars, in 2014 NPV terms**

|  | Low         | Medium      | High        |
|--|-------------|-------------|-------------|
| <b>Costs incurred within South Sudan</b> | 1.7         | 8.7         | 21.3        |
| <b>Regional humanitarian responses</b>   | 1.14        | 6.3         | 11          |
| <b>TOTAL</b>                             | <b>2.84</b> | <b>15.0</b> | <b>32.3</b> |

Source: Frontier Economics

### 3.5 Wider costs

While the preceding sections have quantified various categories of costs resulting from the conflict, it is also the case that the effects of the conflict go well beyond the analysis presented. For example, a key issue is the extent to which conflict will increase internal fragmentation within South Sudan. Wide regional disparities in poverty and other social indicators were present prior to the conflict. A further entrenchment of these disparities is likely to lead to increase instabilities and thus further undermine the long term development potential of the country.

Another key issue not dealt with in the analysis presented is the social cost of the conflict for this young nation, just emerging from nearly two decades of brutal war with Sudan. The political violence unleashed in December 2013 has been especially damaging because it has targeted the most vulnerable groups: women, children, the elderly and disabled. The pervasive use of sexual and gender-based violence against women and girls is one manifestation of the unravelling of social norms and values that has characterized this conflict. Others include the weakening of traditional social safety nets, the adverse impact on people's sense of dignity and pride, and the palpable sense of mistrust amongst people who only months ago were neighbours. They indicate that South Sudan will need ongoing support and assistance from its neighbours and the international community to develop ways of reconnecting people with their sense of belonging in society. This reconnecting needs to happen at the individual level, but it is also critical to ensure the country as a whole can undergo the kind of social, psychological and economic transformation necessary to achieve lasting peace and reconciliation.



Protection of Civilians site at the UNMISS base in Bentiu, Unity state, July 2014. Photo: Josh Estey/CARE

The risk that South Sudan might become a “failed state” has obvious implications for South Sudan itself, but also the wider region. In the first instance, these costs take the form of foregone opportunities for regional development. These foregone opportunities include lost opportunities for strengthened regional integration and linkages.

There are also likely to be significant concerns in the international community of the security risk of second failed state in the region, in light of recent experiences in Somalia. The economic cost to neighbours is difficult to quantify, though the costs associated with intervention in Somalia can provide some guidance to the possible impacts were a similar situation to be replicated in South Sudan.

## 4 CONCLUSIONS

The conflict in South Sudan has already imposed significant costs to South Sudan, its neighbours, and the international community. This research has sought to identify the additional costs involved if the conflict were to be prolonged.

For **South Sudan**, the macro-economic costs of war measured in terms of lost opportunities for economic growth are substantial and increase rapidly the longer the war lasts. The value of these foregone opportunities range, depending on duration of the conflict, **from around US\$ 1.8 billion to US\$ 7.7 billion if the effects are considered over a period of 5 years, and US \$ 2.0 billion and US\$ 38 billion if the effects are considered over 20 years** (i.e. allowing for the fact that the effects of conflict are observable not only in the years of the conflict but also in subsequent years). These estimates reflect, essentially, a comparison between the effects of conflict, on one hand, and the pre-existing state of affairs. If one compares the effects of conflict to estimates of South Sudan's expected long run growth path, the costs are much more substantial: between **US\$ 122 billion and US\$ 158 billion (in net present value terms)** if considered over a 20-year horizon.

These findings are important as they:

- Demonstrate that the costs to South Sudan of a relatively short-duration conflict are substantial and escalate rapidly as the duration of the conflict increases, i.e. there are significant gains from preventing the conflict from going beyond 2015.
- Demonstrate the value of lost growth opportunities. Conventionally, civil society and governments measure the costs of conflict relative to conditions that prevailed prior to the conflict. However, a truer measure of the costs lies in the losses compared to how fast the country *might have grown in the absence of conflict if its development potential were to be harnessed*.

**The results also suggest that the costs of the conflict are likely to propagate across the region as a whole**, and at an increasing rate the longer the conflict lasts. The region as a whole could save between **US\$ 31 billion and US\$ 53 billion** in avoided GDP loss by ensuring that the conflict is resolved within a year, and does not turn into a prolonged civil war of 5 years or more. These costs are separate to the financial outlays that countries within the region may have to make to meet humanitarian needs (associated with an influx of refugees) or to address security issues created by the conflict in South Sudan.

The results also point to gains for the international community through early action. Taking into account both costs incurred within South Sudan for peace-keeping and humanitarian efforts, and those within the region to address spillover effects (mainly through the flow of refugees), the international community could save around US\$ 30 billion by ensuring that the conflict is resolved within a year rather than turn into a 5 year conflict. Note that this figure does not include funds that would be needed for reconstruction (e.g. of infrastructure) and therefore is almost certainly an under-estimate of the total cost of the conflict to the international community.

## 5 RECOMMENDATIONS

The following recommendations prioritise the actions that are urgently needed to end the conflict in South Sudan and protect civilians who are affected by the fighting:

### 1 Establish an international contact group to help secure peace in South Sudan

More targeted and frequent discussion and cooperation are needed among the parties who have an interest in peace in South Sudan. The contact group could include the Intergovernmental Authority on Development (IGAD), African Union (AU), United Nations (UN), Troika (U.S., UK and Norway), European Union (EU), China and South Africa.

1.1 African leaders should consider using the African Union Summit in January 2015 to request the formation of a contact group by the AU Commission and/or the UN Secretary-General to facilitate coordination and discussion to ensure the protection of civilians and a swift end to the conflict.

### 2 Dramatically raise the pressure on the parties to the conflict to end the fighting and implement the resolutions of the 28th Extraordinary Summit of the IGAD Heads of State and Government on 7 November 2014 with clear timelines and benchmarks for full compliance with the cessation of hostilities agreement:

2.1 The parties to the conflict should commit to an unconditional, complete and immediate end to all hostilities, and to the immediate cessation of the recruitment and mobilisation of civilians.

2.2 Collective action by the IGAD region should be taken against any party responsible for any violation of the cessation of hostilities.

2.3 If the parties to the conflict continue to violate the cessation of hostilities agreement and escalate the fighting, the IGAD region should take the necessary measures to directly intervene in South Sudan to protect civilians and restore peace and stability.

2.4 Should it be required to implement the IGAD resolutions, the AU Peace and Security Council, the UN Security Council and the entire international community should render all possible assistance in the implementation of these resolutions in the interests of protecting civilians and securing a sustainable peace.

### 3 Insist on an inclusive approach to peace negotiations so that all South Sudanese people have a stake in their nation's future

From the very beginning of the conflict, IGAD, the AU and the UN Security Council have been strong proponents of the need for the peace talks to include a wide range of South Sudanese stakeholders. They have helped to facilitate the inclusion of the Churches, women, youth and civil society representatives in the processes under the auspices of IGAD. There is scope to improve the level and nature of the engagement by all of these groups, especially as the space available to civil society inside South Sudan continues to shrink.

As the conflict in South Sudan has evolved over the last twelve months, it has provided oxygen to old ethnic and inter-communal rivalries and other unresolved historic grievances. It has also set off a range of complex power plays amongst various armed groups who are often loosely aligned with either the government or the SPLM-IO. None of these semi or fully autonomous armed groups are parties to the IGAD peace talks and there is a real risk that they will disregard any cessation of hostilities agreement that the two main parties to the conflict agree to.

3.1 IGAD with the backing of the AU and the UNSC should continue to support the active participation of the South Sudanese Churches, women, youth and civil society in the peace process to ensure their needs and aspirations are heard and they can play an active role in shaping the rebuilding of their country.

3.2 The peace process must secure the participation of the semi and fully autonomous armed groups operating in South Sudan so they are parties to any security arrangements and do not become spoilers.

### 4 Ensure accountability, reconciliation and healing processes take root in South Sudan

The culture of impunity in South Sudan fuels atrocities and must be tackled if the reoccurring cycles of violence are to end. Neither of the two major parties to the conflict have upheld their responsibility to protect. Armed actors across the country have committed gross violations of international humanitarian and human rights law which may amount to war crimes and crimes against humanity. Those found guilty of such crimes should be held accountable, regardless of their affiliation or position.

However holding perpetrators accountable is just part of the answer. Ethnic and other divisions that have arisen or been accentuated by the conflict need to be addressed so there can be a healing process and lasting national reconciliation. If South Sudan is to develop an approach to transitional justice that is responsive to the views and aspirations of its people, the discussion should begin now.

4.1 IGAD and the AU, with the support of the UN Security Council, should assist the Government of South Sudan to begin to take steps towards accountability, reconciliation and healing.

4.1.1 Any peace agreement should exclude amnesty for those responsible for serious crimes. It should require that during the Transitional Period South Sudan publicly commits to fair, credible criminal investigation and prosecution of serious crimes committed during the current conflict. The Government of South Sudan should request international assistance from the United Nations and African Union to establish a hybrid mechanism to try to the most serious crimes committed during the current conflict. The hybrid mechanism could be staffed by a combination of South Sudanese and foreign legal professionals. The involvement of international experts would help ensure trials meet international standards, and the participation of nationals would promote local ownership of the process and skills transfers to South Sudan's justice system.

4.1.2 Any peace agreement should also require South Sudan to establish a national body during the Transitional Period that will promote reconciliation and healing. It is for the people of South Sudan to determine whether a Reconciliation and Healing Commission and a Truth Commission are needed, or some combination of the two. Any mechanisms established to heal and reconcile South Sudan need to involve people at the grassroots level, be culturally appropriate and be owned and driven by communities so they respond to the circumstances in South Sudan.

4.2 The AU Peace and Security Council should publicly release the report of the AU Commission of Inquiry on South Sudan as soon as possible so that its recommendations on accountability, reconciliation and healing can be implemented without further delay. This report should also be used as the basis for imposing targeted individual sanctions such as asset freezes and travel bans, as outlined in the IGAD resolutions of 7 November 2014. The AU PSC should also establish follow-up measures to ensure implementation of the Commission's recommendations occur in a timely manner.

## 5 Avert famine and meet the humanitarian needs of all civilians in need

South Sudan managed to avert a famine in 2014 because the humanitarian community and international donors stepped in to provide food and other assistance. The risk that famine might still take hold in parts of South Sudan by March 2015 remains high. According to the United Nations, South Sudan is already in a major malnutrition crisis. It projects that 6.4 million people will be facing food insecurity between January and March 2015 and \$1.81 billion will be needed over the course of 2015.<sup>57</sup>

The best way to avert a famine is to end the conflict and open up full and unhindered humanitarian access to all civilians in need. Only then will some of the two million refugees and internally displaced people have the ability and the confidence to return home, plant their crops, and rebuild their livelihoods.

Although saving lives must be the priority, there are other humanitarian needs that require urgent attention. Women, children and the elderly are among the most vulnerable groups who require specialist interventions and support. Acting now will be far more beneficial for survivors of gender based violence or forced recruitment. The continued generosity of international donors will be crucial to ensure relief is provided to these groups.

Even if the fighting were to stop tomorrow, the humanitarian impact of what has already happened will continue to be felt throughout 2015 and beyond.

5.1 The Government of South Sudan should fulfil its responsibility to provide for its people and encourage international donors to increase support for the aid effort.

5.2 Given the scale of the need and the urgency, South Sudan, donor governments and humanitarian agencies must redouble their efforts to increase humanitarian assistance. More non-traditional or non-Western donors need to contribute their fair share. Funds received in the first quarter of the year will be more cost-effective as aid can be distributed and pre-positioned before the rainy season drives up delivery costs and makes many communities difficult to reach.

5.3 All parties to the conflict must protect civilians and ensure full and unhindered humanitarian access. They must also respect the neutrality of humanitarian actors by keeping all humanitarian workers and their property safe.

5.4 Refugee-hosting countries (primarily, Kenya, Uganda, Ethiopia and Sudan) need to remain committed to receiving South Sudanese fleeing across borders. The international donor community must provide assistance to meet the needs of these refugees.

5.5 International donors should fund specialised gender-based violence (GBV) and child protection programming and ensure safe and timely access to quality reproductive health care, psycho-social support and family tracing programs.

5.6 The international community should support the UN peacekeeping mission in South Sudan (UNMISS) and the UN Interim Security Force in Abyei (UNISFA) to reorient their focus, structure and staffing to fully prioritise the protection of civilians and human rights reporting. Further, UNMISS should:

5.6.1 Expand its ability to increase security outside its bases, identifying through consultation with communities how best to improve security conditions.

5.6.2 Remain committed to hosting displaced civilians on its bases until they decide that it is safe to leave. Any relocation of civilians between sites must be informed, voluntary and dignified.

5.6.3 Regularly document, investigate, and publicly report on human rights and humanitarian law violations by all parties to the conflict with a view to ensuring information is not lost and to promoting an end to impunity.

## Recommendations for the medium-term:

### 6 Bring greater transparency and accountability to the management of oil and mineral resources and all government expenditure to help build the legitimacy of the state

The IMF's recent report on South Sudan concluded that there is an urgent need for the country to focus on nation building and on key measures to help build stability and the legitimacy of the state.<sup>58</sup> Given oil accounts for the overwhelming majority of South Sudan's revenues, it was not surprising that oil revenue management was a particular focus of its recommendations.

The government has borrowed substantial amounts of money from oil companies operating in South Sudan, effectively mortgaging this future revenue stream. The terms of these loans have not been disclosed and little public information is available to indicate how the Government is funding the war effort. South Sudan recently came in 171 out of 175 countries on Transparency International's Corruption Perceptions Index, indicating that the government should "adopt radical anti-corruption measures in favour of the people".<sup>59</sup>

6.1 In order for South Sudan to develop economically and its citizens to emerge from poverty, the Government, with the cooperation of the international community should:

6.1.1 Urgently improve transparency and accountability in the management of mineral resources and government expenditures. This should include the wide dissemination of data relating to the oil industry as well as fiscal and financial data.

6.1.2 Encourage authorities to enact the *Petroleum Revenue Management Act*.

### 7 Once peace is restored, support South Sudan to develop and implement targeted recovery and development programmes

The conflict in South Sudan came at a time when the fledgling nation was just beginning to show signs of economic recovery after decades of war. But the fighting has disrupted an already weak service delivery system, particularly in the three states most affected by conflict. The impacts on access to education, clean drinking water and healthcare have been devastating in Jonglei, Unity and Upper Nile states. Meanwhile, funding and resources to more stable parts of the country have been diverted, threatening to reverse the progress made to date in these areas.

7.1 All recovery and development programmes should be oriented to the needs and priorities of the people of South Sudan.

7.2 The National Unity Government will need to work with the financial and technical support of the international community to lay strong foundations for a new South Sudan that is stable, democratic and prosperous.



UN Peacekeepers help move families from a flooded "Protection of Civilians (PoC)" site to a new site at the UNMISS base in Bor. October 2014. UN Photo/Isaac Gideon

7.3 More equitable distribution of available public resources will be critical to maintain peace. The current distribution model has skewed benefits towards the urban elites and left the rural population, the overwhelming majority, in abject poverty. Addressing this long-standing inequality will require political commitment and determination to put the welfare and future of the country ahead of these powerful vested interests.

7.4 Strategic investments designed to rejuvenate livelihoods lost during the war and promote economic growth should be prioritized, including infrastructure development, agriculture, science, technology and social service delivery. Opportunities for promoting the development of the private sector should also be a priority.

7.5 Given the acute impact of the war on women, all recovery and development efforts should be gender sensitive. Consultation with women is vital, given the role that women are playing in sustaining the population, and the fact that they are heavily involved in the informal economy that supports most of the population.

7.6 Effective management of security sector reform and disarmament, demobilization and reintegration programs will be required to reduce the incentives for spoiling peace. Previous DDR programs failed to offer the right range of measures to convince all parties to surrender their weapons and attract former combatants back into civilian life.

7.7 Engaging youth in productive activities will be essential to maintain peace and stability. High levels of unemployment, lack of quality educational opportunities, and endemic poverty have combined to cause many South Sudan youth to resort to violence to get by. Any reconstruction endeavors will need to investment in young people including through increased access to scholarships, employment opportunities, and financial transfers.

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## ENDNOTES

- 1 Measured over the duration of the conflict as the lost value of GDP relative to South Sudan's expected growth path absent the conflict. These figures are in 2014 dollar terms.
- 2 All figures are in 2014 dollars.
- 3 Based on the conflict starting in December 2013.
- 4 The Uganda Peoples Defence Forces (UPDF) is directly involved in the conflict in South Sudan. Since January 2014, the UPDF has publicly stated that its troops were in the country on the invitation of the President of South Sudan which requested immediate military intervention to restore calm in the country. See *Sudan Tribune*, 11 January 2014, available at <http://www.sudantribune.com/spip.php?article49929>
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- 23 Clearly, results will be sensitive to various assumptions regarding oil production volumes and prices. Tracing the results of these variations to changes in GDP would require a more elaborate model that calibrates changes in GDP to the value of oil production. Data and time constraints preclude the development of such a model.
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