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POLICY BRIEF

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Railway: A Better Option than Pipeline for South Sudan

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The Minister for Petroleum and Mining declared during the SPLM General Secretariat briefing¹ that the construction of an oil pipeline would start in October 2013. To many, his announcement came as a relief. The news on what steps the Republic of South Sudan would take to stop the fruitless talks with Sudan and restart oil exports was long overdue. The Minister's proposal for a solution to the endless and ineffective negotiations predicament is laudable. But is building a pipeline at a cost of \$3 to \$6 billion dollars the best option for South Sudan in the long-term (Oluoch, 2013)? Not quite, as the proposal below might be a cost effective alternative.

The frustration over the impasse in the negotiations with Sudan, and the urgent desire to rescue the economy are understandable. However, this should not cloud the nation's vision for long-term investment dealing with the oil sector. Caution and thoughtfulness need to be exercised when it comes to deciding an alternative way of exporting South Sudan's oil. Crude oil can be transported in many ways: over land through a pipeline, by train, or by truck. To some extent, oil could even be transported on river barges. For South Sudan, all the aforementioned options are worth considering, and railway may turn out to be the most attractive of these.

Exporting oil via railway may seem outlandish to some, while others wonder whether it is even possible. But yes, trains transport crude oil in many countries, and it may be the best option for South Sudan as well. Freightng crude oil by rail is not a new practice. In the United States, railways have been used for oil transport since 1860's when the black gold was first produced in larger quantities. John Rockefeller built his Standard Oil Empire² with the help of railways before pipelines

¹ The briefing was posted in www.splmtoday.com on February 3, 2013

² Standard Oil is the parent company of Exxon Mobil, Chevron, ConocoPhillips, and

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increasingly replaced them following the construction of the first major US pipeline in Pennsylvania in 1879 (LaGessee, 2012).

While railways became less and less important as a mode of oil transport over time, they are now gaining prominence again in the US, thanks to the oil boom in North Dakota and the Midwest. Without railroads, the newly discovered oil could not reach the refineries and transport hubs at the coastline. In 2012, the volume of crude oil transported via railway in the US was 340,000 barrels per day (Mordant, 2012). This number is likely to increase further as hydraulic fracturing technology helps increase US oil production. Similarly, Russia exported 350,000 barrels per day of crude oil by railroad to China and Europe in 2011, according to the US Energy Information Administration (EIA, 2012).

As a landlocked country, South Sudan faces particular export and development challenges. For oil exports, the country needs to access the coastlines by road, by rail, or through pipeline. At the same time, it must invest in many other development priorities. In its current economic state, South Sudan cannot afford to build roads, railways, and a pipeline at the same time. It must choose what to acquire first in order to stimulate the growth of her nascent economy. Looking at the three options, railway offers the best opportunity for restarting oil exports and stimulating long-term economic growth.

Building a pipeline would be a sensible capital budgeting for an oil company with a concession period of 10 to 30 years. It would similarly be an economically sound policy move for a country that has a coastline or other ways to access the sea. Nevertheless, it might not be the best option for a nation without shoreline, whose infrastructure is in tatters, and particularly one whose crude oil production might be temporary.

Pipelines are often seen as the method of choice for transporting oil, while railways are quickly dismissed as prohibitively expensive. However, South Sudan must not choose options on the basis of cost per barrel alone. Our problem has not just been to get the oil to shore. If it was the issue, oil would still be exported through Sudan, and we would turn a blind eye to the North's misdeeds. However, we cannot afford to ignore the failings of Sudan, and every decision on our resources must be taken with our nation's future in mind. The resumption of oil exports must be discussed against the backdrop of the nation's commercial potential; whereas a pipeline helps restart oil revenue, it does not do much else.

With very little financing resources available, the Republic of South Sudan cannot afford to consign \$3 to \$6 billion dollars to an expendable asset. While oil companies' build-own-operate-transfer (BOOT) proposals sounds as if they include a "free lunch", investors will do everything and anything – including raising the fees during the concession period – to get a rate of return commensurate to their investment. The young nation could end up paying an exorbitant premium to investors. In addition, by the time the pipeline ownership is finally transferred, the

pipeline would be of little use. An example using fairly optimistic figures from the Ministry of Petroleum and Mining makes the point very clear: South Sudan has 7 billion barrels of proven crude oil reserves, and the pipeline could transport 700,000 to 1 million barrels per day (Gilblom, 2012). Assuming no additional proven reserves are discovered, and assuming an average daily production of 850,000 barrels, it would take 22 years to produce all the crude oil. At the end of the concession period, the country would start to own a pipeline of little or no use, as there would be no more oil to export. This is a zero or negative return on the investment, depending on the fees charged during the concession period.

Instead, South Sudan should use BOOT to build a railway. Once the concession expires and ownership is transferred, we then would own an asset that can still contribute to the nation's economy. A railway would offer positive options, flexibility, and control that a pipeline lacks. With railway, there are four ways to access the sea, while there are only two options for a pipeline. A railway can be built straight from the oil fields in South Sudan to Kenya or Djibouti's seashore. Secondly, the railway from South Sudan could connect to the existing Kenya-Uganda railway or the soon to be built Ethiopian railway to Djibouti. Railway also provides control. The number of railcars can be increased or decreased according to production level, leaving a lot of room for other items to be transported. Pipelines are one-dimensional because only fluid goods can flow through them. They do not help diversify South Sudan's economy. On the contrary, pipelines lock us in the "oil curse" prophesy fulfilled.

In addition, railways are less susceptible to sabotage than pipelines. Oil spills from railway transport are less disastrous than from a pipeline's because accidents usually affect only one or several railcars. Pipeline accidents or sabotage may affect nearly the entire cargo in transit, notwithstanding other dangerous environmental consequences.

Based on the costs of the railways recently built in Africa, it would cost \$3.5 to \$6 billion to build a single-track, and \$6 billion to \$10 billion to build a double-track railway from the oil fields of South Sudan to the seaboard (Bratiguam, 2010). Although the cost of building railway is marginally higher, depending on the railway module chosen, the long-term revenue generated from transporting other goods and the overall positive effect on the economy would level off the excess costs.

In fact, railways are the hidden lifeblood and backbone of the US and other developed economies. Once built, railways promote regional trade, and would allow South Sudan to export commodities such as agriculture produce and light manufactured items. It would also help the country to cheaply import goods and raw materials, thus helping to curb inflation.

South Sudan cannot mortgage her future on an asset that will be defunct when its ownership is assumed. Building a pipeline with our scarce resources means confining capital in dispensable infrastructure. The Ministry of Petroleum and

Mining, in collaboration with the Ministry of Finance and Economic Planning, and the Ministry of Transport should investigate thoroughly all options available for transporting the crude oil to the seashore before sanctioning pipeline construction in haste. People or companies that do have vested interests should not do the necessary feasibility studies. Ideally, the Ministry of Petroleum and Mining should do the investigation, and feasibility studies, not potential suitors.

A railway maybe made of steel, but it could be the softest way to the sea for the Republic of South Sudan, unless a thorough cost and benefit analysis says otherwise. It presents long-term benefits for South Sudan, unlike the pipeline.

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