Yiwen Hu, Student Participant
Upper Arlington High School
Upper Arlington, Ohio

To what extent will implementing a free-enterprise zone raise the farm income and productivity of a subsistence farmer in Sudan?

I. PROBLEMS

Two thirds of Sudan's population is subsistence farmers, with a majority residing in the south and in the low-rainfall savannas of central and western Sudan ("The Sudan"). Most of them are small-scale farmers and herders trying to make a living on Sudan's meager 6.89% of arable land ("Sudan"). The most common crops are sorghum, millet, cotton, wheat, and gum Arabic, while sheep is the most common type of livestock. The subsistence farmers are hindered by the "limited size of their land holdings, low rates of productivity and an inability to improve their incomes" ("Rural Poverty in the Sudan").

PROPERTY RIGHTS

One of the main reasons for the limited size of the land holdings of the subsistence farmers is the lack of property rights. The Sudanese government provides no land security as it can seize the farmers' land anytime without any warning. One example is in the 1970s when the government simply took land away from the subsistence farmers and used it for mechanized farming ("Sudan: economic"). The subsistence farmers then had to find other land to grow their crops. With no property rights, most farmers do not expand their land holding for the fear that the government will simply come and take it away.

LOW PRODUCTIVITY

There are four main reasons for low productivity. The first is irregular rainfall. Sometimes rain is as infrequent as once every two years ("Sudan: Political"). The irrigation system does not make up for the uneven rainfall, forcing farmers to deal with short growing seasons which result in frequent crop failures and a low yield ("The Sudan"). The lack of water also affects the herders' ability to maintain livestock, as they now must travel further in order to get water. The second cause is environmental degradation, resulting in a decreasing amount of quality land ("Beyond Darfur"). Another reason of low productivity is poor planting techniques which cause soil erosion and desertification. Furthermore, the subsistence farmers have been using the same primitive and inefficient techniques of farming for generations. Unfortunately, these techniques are no longer adequate in the harsher environment today.

INABILITY TO IMPROVE INCOMES

With a median age of 18.9 and 40% under the age of 15 ("Sudan") the dependency ratio is high, meaning that household income needs to be spread among more people. To exacerbate the problem, Sudan is currently facing a population increase, with a 2.134% growth in 2008 ("Sudan"). Not only does this put further strain on the already scarce resources of food and water, but it also worsens the population density forcing more people to share and farm on a decreasing amount of land (Power).

Ethnic tension between the Arabs and the Africans is another reason for the inability to improve farm income. Although the Arabs are the minority in the country, they hold the most power, politically and economically ("Sudan: Country Brief"). Since the Africans, in the government's eyes, are inferior to the Arabs, many of the policies that benefit the Arabs hurt the Africans, putting Africans in a deeper trench and preventing the African farmers from increasing their incomes. While the majority of Africans are under the poverty line, the worst off are the subsistence farmers.

II. ECONOMIC DEVELOPMENT

Despite its years of internal strife, Sudan has a huge potential for economic development. It has many precious natural resources, including gum Arabic, a sap from Acacia trees that are most common in Sudan and is a natural emulsifier. Pharmaceutical companies use it to “keep medicines from separating into their different ingredients, and a dab of gum Arabic makes newspaper ink more cohesive and permanent” (Thompkins). It is also a key ingredient in soft drinks. Sudan “exports tens of thousands of tons of raw gum Arabic each year…[which are then] sent to Europe for processing” (Thompkins).

Oil is another major sector of Sudan’s economy, as they make up 90% of Sudan’s exports (“Sudan”). Many Asian companies heavily invest in Sudan’s oil industries, such as India’s Oil and Natural Gas Corp. Ltd (ONGC) (Joseph). ONGC’s main shareholders are American Funds, Fidelity International, Bershire Hathaway, and T Rowe Price, indicating that, despite the American embargo on Sudan, many companies see Sudan as a potential investment opportunity. This claim is further supported by the number of Western Foreign Investment such as Coca-Cola and BMW who defied the West’s attitude of isolating Sudan (Gettleman).

Despite Sudan’s rapid growth, however, there is a great wealth inequality, as wealth is mostly concentrated in the Arab north while the African south and the rural areas are the epitome for poverty. The North and the urban areas have been booming since the civil wars. Khartoum, the capital city, and Juba, the main city in the south are now classified as Middle Income cities (“Sudan: Country Brief”). Here, BMWs and sights of women dressed in the latest fashion going to mega-shopping malls are not uncommon. The main reason for this prosperity is oil. Some of the money Sudan makes on oil export go to infrastructure building, such as hospitals, roads, and schools though this is mainly to please the technocrats and government officials who live in the area (Gettleman). Nevertheless, economic development in the North and urban areas around the country has been promising. On the other hand, the South, where most of the subsistence farmers live, is extremely underdeveloped. Infrastructure is scarce, and non-agricultural sectors are practically nonexistent. However, there have been attempts at economic development, though continuous violence and war prevented major economic reforms before the 1980s (“Rural Poverty in the Sudan”).

ECONOMIC DEVELOPMENT IN SOUTH AND WEST

In 1984, the World Bank stepped in to address poor farming techniques and the lack of infrastructure. First, it initiated the Stock Route Project sought to “ensure the continued flow of marketed livestock” by building roads and water reservoirs (The World Bank Group “Stock Route”). The second project, the Southern Kassala Agricultural Project, addressed “two keys constraints to agricultural development: environmental degradation… and declining productivity” (“Southern Kassala”). Agricultural development and increasing the availability of improved seeds were components of the project. The third project was the Sudan Road Rehabilitation Project, which aimed at repairing roads on Sudan’s main transport artery (“Khartoum”). All three projects failed. The Sudanese government squandered the money the World Bank had loaned them and refused to repay the $27 billion debt that it incuured. The World Bank closed its offices in Sudan in April 1993 (“Sudan: Country Brief”).

In 1999, after some Western-trained Sudanese convinced the IMF that they, instead of the government, would administer the IMF loan to stabilize the economy. Reforms that reduced government spending, privatized state-owned businesses, and lowered inflation were implemented (Gettleman). While the IMF achieved its goals, it did essential nothing for the poor and subsistence farmers and widened the wealth gap between the North and the South.

Inspired by the success with IMF, the World Bank came back to Sudan in 2005 and pledged $4.6 billion (The World Bank "Multi-Donor Trust Funds") to help the poorest of the Sudanese. The new plan seeks to increase "access to basic human services, and [raise] economic growth among the [rural poor]" ("Sudan: Country Brief"). Though the new plan has potential, it has not been implemented long enough to effect results.

WHY THEY FAILED

According to foreign policy expert Stephen Ellis, previous attempts at rural development failed because of two main reasons. The first is the time frame. A seriously troubled state, such as Sudan, "requires a comprehensive medium-term strategy, [which is around 10 years], not a quick fix" (4). The second weakness in past attempts is that "most are too narrowly oriented toward individual states" (5). Though most of Sudan's conflicts have been "civil wars," many of the rebels receive arms from neighboring countries, making the violence interstate. Therefore, attempts to rebuild Sudan "must take regional dynamics into account" (5) and region-wide cooperation is necessary, especially when rebuilding the economy is involved.

III. POSITION

Imagine an oil-spot dripped on a piece of cloth. Over time, it begins to permeate in all directions until the cloth is completely soggy.

This oil-spot strategy was first created by Andrew Krepinevich, a professor at George Mason University, as a way to win the war in Iraq. Krepinevich said that this tactic works precisely because it "focuses on establishing security [one village and in doing so]… winning hearts and minds" (5). The strategy first calls for obtaining physical security in one town, thus winning over the town's people, and then, the security will disseminate to other towns as people want to be safe. Similarly, this idea can be used for rebuilding Sudan and increasing subsistence farmers' income. By first creating free-enterprise zone in one area of Sudan, that particular town's secured physical and economic stability will eventually spread to other parts of the country as other people are attracted by the security the oil-spot offers.

A. FREE-ENTERPRISE ZONE

The initial "oil-spot"- the free-enterprise zone- will be in the Sahel by the White Nile between Juba and Khartoum ("Who Owns the Nile?"). The first step is to establish conditions of the zone that will attract anchor corporations such as processing factories, logistics, storage, and transportation firms. Land and utilities will be subsidized, and taxes will be exempted. Furthermore, they, or any other foreigners, can own freehold property. The zone will also have an open-skies policy. The only requirements are that the corporations must use and train Sudanese labor for all the work and that the anchor corporations must build and pay for their own buildings, warehouses, and factories. However, infrastructure, such as roads, will be provided.

These anchor corporations will also attract complementary corporations. These privately- owned businesses serve the anchors and the labor community. The complementary businesses will not only bring in more jobs but will also diversify the economy. When waves of people migrate to the zone, they need places to live and to eat. Private companies that specialize in housing, restaurants, grocery stores, etc. will spring up, bringing more jobs to the service sector and adding to the income stream. Unlike the anchors, the complementary businesses will not need subsidies since they have a profit incentive that is adequate for them to open businesses. Their revenues will be taxed minimally and thus will form the tax base. They can own freehold property, and, similar to the anchors, the only requirements are that they must use and train Sudanese labor and that they build their own buildings.

The free-enterprise zone will also help the subsistence farmers. Grocery stores, restaurants, and housing businesses established in the zone will provide a substantial market for fresh vegetables, fruits, and meat. This heavy demand gives the farmers incentives to grow these products. Many businesses that want to ensure that they get a constant stream of fresh products will engage the farmers with long-term contracts. With the income stream, the farmers can borrow additional capital to improve their operations and thus increase their productivity.

B. BENEFITS OF THE ZONE

JOBS DIVERSIFICATION

With 80% of the population working in agriculture, not all the labor is fully-employed. Excluding planting and harvesting seasons, there is surplus of labor. The Lewis Dual Sector Model claims that the surplus labor can be moved to other sectors of production without affecting the outputs of the subsistence farmers in order to diversify the economy. Economist Alan Glanville says that a “wage about 30% higher than the low subsistence income is assumed to be sufficient to induce the rural-urban migration” (502). The zone offers the surplus labor to work in processing factories, warehouses, and other manufacturing corporations.

PROCESSING RAW MATERIAL

Sudan’s principal exports are all raw materials, including crude oil, gum Arabic, cotton, sesame, and livestock, while its main imports are all processed goods, such as wheat, chemicals, and manufactured goods (“Sudan”). But what if Sudan takes the raw materials and processes them right in Sudan? Not only will it increases the number of manufacturing jobs, but it will also increase Sudan’s exports and decrease its imports, creating a trade surplus.

The number of jobs will drastically increase. By processing Sudan’s numerous raw materials, such as gum Arabic, crude oil, cotton, and livestock right in Sudan, more jobs can be created since the anchors, which include processing factories, must hire Sudanese labor. The Sudanese labor is also getting trained, pushing them from the less-skilled level to the more-skilled level, giving them an edge of getting employed first in the future. With this knowledge and technology transfer, some enterprising Sudanese will take what they have learned, adapt it for the local conditions, and start their own businesses. This knowledge transfer has increasing returns and the benefits will multiply due to an inevitable knowledge leak, as acknowledge by economist William Easterly. Easterly states that “knowledge leaks… and is hard to keep it a secret” (150). The starting of Sudanese businesses will have a multiplier effect- as the knowledge leaks and people use it, the more income will be available.

In addition, processing materials in Sudan is a comparative advantage as it drastically decreases the shipping cost. This gives the subsistence farmers who produce gum Arabic and sheep more opportunities to market their goods, as the goods will be heavy demand. The heavy demand, thus more pay, will then give an incentive to the farmers to rethink their farming techniques and invest in new techniques that will have a greater yield. Eventually, the farmers can increase their farm incomes as they jostle to produce the best quality products.

FOOTHOLD IN AFRICA

The zone is the perfect foothold for logistics and warehouse corporations when they are exploring the new market of Africa. Sudan is the largest country in the continent and being located in sub-Sahara region, it is easy to get to and it is within reasonable distance from the profitable Middle East. It also is an ideal location when air- transporting things between Asia and South America, providing a rest stop. In addition, since much of Africa is not developed or has been explored by corporations, Sudan can be the headquarters of these corporations, especially when they are doing fieldwork.

C. HOW IT WILL BE ADMINISTERED

THE BOARD

One of the goals of this zone is to circumvent the government who has proven to be detrimental to economic development as it is corrupt and seems to be indifferent to the poor. Thus, an independent board will be established. The board members will be regional, from different countries in Africa and the Middle East, and thus addressing the third point of Stephen Ellis' argument of why past attempts have failed.

By using the Doing business Index which measures the ease of doing business and the Transparency International's Corruption Perception Index, members representing South Africa, Namibia, Botswana, UAE, Kenya, Ethiopia, Ghana, Uganda, Libya, and Sudan will be on the board. Members will be selected based on their deep understanding of globalization and regional economics and are incorruptible (Transparency International; World Bank Group "Economy Rankings"). In addition, four experts will also be brought in for making sure that the board is on track: divergent economists Jeffrey Sachs and William Easterly, Nobel Peace Prize winner and microfinance expert Mohammad Yunas, and an agricultural economist from Africa.

FINANCIAL SOURCES

The money used to first establish the free-enterprise zone will come from the Multi-Donor Trust Fund which has pledged $4.6 billion to help Sudan for the next three years. However, as seen in previous attempts, three-year interventions do not work. Hence, the money will be better utilized if it were diverted to the building of the free-enterprise zone, as the results will be better and longer-lasting. There will also be a branch of the Grameen Bank, a microfinance institution founded by Mohammad Yunas. It will serve new Sudanese entrepreneurs who take the knowledge they learn in the factories and adapt it to the local conditions. By encouraging Sudanese people to start their own businesses, their economic growth can be self-sustained and self-independent.

WORLD ORGANIZATIONS

Because the free-enterprise zone takes place in a war area, European Union soldiers are needed in order to keep order and to guard against violence for the first five years until the government starts to benefit and the opportunity cost of civil war becomes too high. Other world organizations are needed to help the subsistence farmers. The farmers, facing an increasing demand for foodstuffs, gum Arabic, and sheep, will need to change their farming techniques. This requires outside intervention as there is no time for the farmers to do so experimentally. The World Bank, the IMF, and NGOs such as OIC are perfect for the job. They can have people going around the neighboring areas and teaching the farmers how to farm. Then, periodically, the workers can check on the farmers. After a few years of fieldwork, the farmers should be accustomed to the new farming techniques and will be happy to accept them since they increase the farm income and productivity.

IV. CONCLUSION

Many critics say that economic development in Sudan is impossible because it is in a bad neighborhood. Economist Paul Collier states that "if a country's neighbors [grow] by 1%, it will grow at 0.4%" (56). Unfortunately, Sudan's neighbors, Ethiopia, Uganda, Zaire, Chad, Eritrea, and Egypt are politically unstable and lack economic development, holding Sudan back. To make matters worse, Sudan is landlocked and must rely on its neighbors' transportation system, but since Sudan is in a poor neighborhood, infrastructure is scarce. Thus Collier concludes that if its neighbors do not improve, Sudan cannot develop.

Though Collier's argument is sound in theory, in practice, it falters. One striking counter-example is Dubai. Though the United Arab Emirates is surrounded by "bad" neighbors, such as Saudi Arabia, Oman, Pakistan, and Iraq, Dubai has transformed itself to a business and tourist hub, with "almost 5 million foreign visitors a year" ("Arabia's Field"). Rather than a liability, the bad neighborhood is actually an asset. As the bright spot in the region, it has lured the brightest entrepreneurs in the world due to its openness to foreigners and its economic-growth policies ("Arabia's Field"). Sudan, like Dubai, can offer attractive opportunities through the zone. Smart people from Uganda, Ethiopia, and other neighboring countries will come to Sudan as they have the potential of raising their standard of living in a familiar culture. Furthermore, though Sudan cannot depend on its neighbors' infrastructure, an airport will be built in the zone. With the transportation problems solved, Sudan can avoid the "bad neighbor" problem and become the bright spot in the region.

Another criticism is that, in the past, the corrupt Sudanese government diverted money from the programs. Why would the same selfish government allow a free-enterprise zone that will primarily affect the South and West? The government clearly does not care for its people, as it has condoned to civil wars, armed the militia that has been ethnic cleansing Darfurians since 2003, and has neglected the rural farmers ("Sudan: Country Brief").

Certainly, the government has shown indifference to the subsistence farmers. However, the zone appeals to President Al-Bashir's ego while trying to circumvent the regime as much as possible. Not only does the establishment of the zone not require any of the government's funds, the government will actually gain money from selling land. The money will come from the Multi-Donors Trust. As the zone grows, so will the tax revenues the state receives. Third, by agreeing to the zone, the government can increase its reputation, something Al-Bashir desperately needs, especially now that he is being prosecuted by the International Criminal Court. Fourth, because he is vilified by the international media, he may choose to change. By supporting economic development in the South and West, he may gain domestic support as well as garnering respect from his region. Finally, the government can gain more legitimacy from the Sudanese as well as the international community by allowing its people to live better.

The third criticism of the zone rests with the regional board. Stephen Ellis states that a board will not work in Sudan because it "[has] too many self-interested outside actors" in domestic politics (7), especially China who has a huge interest in Sudan's oil. Ellis fears that China will undermine the goals of the board and the zone ("Troubled Sudan") in order to benefit itself and the Al-Bashir government.

Ellis's argument is a valid one and thus the board will have over 14 members who are more committed to regional development than pleasing China. The neighbors have interests in Sudan since the oil-spot might spillover into their countries. Second, China might actually cooperate with the zone because it offers an opportunity to diversify the market for Chinese products in Sudan. In addition, other countries and logistics firms will be attracted to the zone because of its proximity to the Middle East, South America and Africa.

Rural people in Sudan need effective and long-lasting economic development. Since the 1980s, many programs were attempted and failed. The government has demonstrated indifference to the plight of the poor. It's time for a new innovative strategy. The free-enterprise zone will ensure food security. By diversifying farm production and channeling under-employed farm labor into enterprising jobs, the rural income base will be varied and sustained above the subsistence level. As the zone increases the standard of living of all its participants, it will spread to other parts of Sudan, and hopefully, to the Sub-Sahara region as well. Implementing a free-enterprise zone can potentially raise the farm income and agricultural productivity of subsistence farmers in Sudan and can save future generations from extreme poverty.

Works Cited

"Arabia's Field of Dreams." The Economist 27 May 2004. 5 Sept. 2008 <http://www.economist.com/ business/displaystory.cfm?story_id=E1_NSDJNRN>.

Barboza, David. "China Tells Businesses to Unionize." New York Times 11 Sept. 2008: 1C. 12 Sept. 2008 <http://www.nytimes.com/2008/09/12/business/worldbusiness/ 12yuan.html?scp=3&sq=China%20Union&st=cse>.

"Beyond Darfur: Sudan in Its Entirety." Africa Action. 19 May 2008. 1 Sept. 2008 <http://www.africaaction.org/resources/ page.php?op=read&documentid=2968&type=6&issues=1024>.

Collier, Paul. The Bottom Billion; Why the Poorest Countries Are Failing and What Can Be Done about It. New York: Oxford UP, 2007.

Easterly, William. The Elusive Quest for Growth; Economists' Adventures and Misadvantures in the Tropics. Cambridge: MIT, 2002.

Ellis, Stephen. "How to Rebuild Africa." Foreign Affairs 84.5 (Sept.-Oct. 2005): 135-148. Academic Search Premier. EBSCO. Upper Arlington High School Lib. 10 Sept. 2008 <http://search.ebscohost.com/>.

Gettleman, Jeffrey. "Far Away from Darfur's Agony, Khartoum Is Booming." International Herald Tribune 24 Oct. 1006. 8 Sept. 2008 <http://www.iht.com/articles/2006/10/23/africa/ web.1024sudan.php?page=2>.

Glanville, Alan. Economics from a Global Perspective. 2003. 2nd ed. Oxford: Glanville, 2005.

Joseph, Lison. "ONGC's Sudan Deals Come under Attack." Live Mint [New York] 30 June 2008. 8 Sept. 2008 <http://www.livemint.com/2008/06/29235254/ONGC8217s-Sudan-deals-come.html>.

Krepinevich, Andrew F., Jr. "How to Win in Iraq." Foreign Affairs 84.5 (Sept.-Oct. 2005): 87-104. Academic Search Premier. EBSCO. Upper Arlington High School Lib. 10 Sept. 2008 <http://search.ebscohost.com/>.

Power, Samantha. “Dying in Darfur.” The New Yorker 30 Aug. 2004. 8 Sept. 2008 <http://www.newyorker.com/archive/2004/08/30/040830fa_fact1?currentPage=all>.

“Rural Poverty in the Sudan.” Rural Poverty Portal. 7 Mar. 2007. International Fund for Agricultural Development. 14 Sept. 2008 <http://www.ruralpovertyportal.org/english/regions/africa/sdn/index.htm>.

“The Sudan.” Britannica Online School Edition. 2008. Encyclopaedia Britannica. 10 Sept. 2008 <http://school.eb.com/>.

“Sudan.” The World Factbook. 21 Aug. 2008. Central Intelligence Agency. 27 Aug. 2008 <https://www.cia.gov/library/publications/the-world-factbook/geos/su.html>.

“Sudan: Economic Overview.” CountryWatch. 2006. CountryWatch. 5 Sept. 2008 <http://www.countrywatch.com/>.

“Sudan HDI Rank.” United Nations Development Programme. 5 Sept. 2008 <http://hdrstats.undp.org/countries/display_cf_xls_ds.cfm?cty_id=SDN>.

“Sudan: People.” CountryWatch. CountryWatch. 5 Sept. 2008 <http://www.countrywatch.com/>.

“Sudan: Political Conditions.” CountryWatch. Mar. 2007. CountryWatch. 12 Sept. 2008 <http://www.countrywatch.com/>.

Thompkins, Gwen. “Gum Arabic: Sudan’s Miracle Commodity.” National Public Radio. 20 June 2007. 9 Sept. 2008 <http://www.npr.org/templates/story/story.php?storyId=11224050>.

Transparency International. “2007 Transparency International Corruption Perceptions Index.” Transparency International. 26 Sept. 2007. 15 Sept. 2008 <http://www.transparency.org/policy_research/surveys_indices/cpi/2007>.

“Troubled Sudan.” Geography in the News. 25 Oct. 2001. Maps101. 15 Sept. 2008 <http://www.maps101.com/Application/GITN/View.aspx?articleID=557>.

“Who Owns the Nile?” Geography in the News. 4 Dec. 1997. Maps101. 14 Sept. 2008 <http://www.maps101.com/Application/GITN/View.aspx?articleID=383>.

The World Bank Group. “Economy Rankings.” Doing Business. 2008. The World Bank. 10 Sept. 2008 <http://www.doingbusiness.org/economyrankings/>.

- - -. “Khartoum- Port Sudan Road Rehabilitation Project.” The World Bank. 22 Oct. 2008. 9 Sept. 2008 <http://web.worldbank.org/external/default/main?pagePK=64027221&piPK=64027220&theSitePK=375422&menuPK=375457&Projectid=P002626>.

- - -. “Multi-Donor Trust Funds Ongoing Development in Sudan.” The World Bank. 29 May 2008. 9 Sept. 2008 <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/SUDANEXTN/>.

- - -. “Southern Kassala Agricultural Project.” The World Bank. 9 Sept. 2008. 9 Sept. 2008 <http://web.worldbank.org/external/default/main?pagePK=64027221&piPK=64027220&theSitePK=375422&menuPK=375457&Projectid=P002601>.

- - -. “Stock Route Project.” The World Bank. 9 Sept. 2008. 9 Sept. 2008 <http://web.worldbank.org/external/default/main?pagePK=64027221&piPK=64027220&theSitePK=375422&menuPK=375457&Projectid=P002593>.

- - -. “Sudan: Country Brief.” The World Bank. Apr. 2008. The World Bank. 11 Sept. 2008 <http://web.worldbank.org>.