International Journal of African Development

Volume 4, Issue 1, Fall 2016

Western Michigan University
College of Arts and Sciences
Department of Economics

International Journal of African Development

Volume 4, Issue 1, Fall 2016

Western Michigan University
College of Arts & Sciences
Department of Economics
Center for African Development Policy Research

Editorial Management Team 2016

International Journal of African Development
Volume 4, Issue 1, Fall 2016

Contents

International Journal of African Development

The Center for African Development Policy Research (CADPR)

Editorial Note

I welcome all our readers to Volume 4 Issue I of the *International Journal of African Development*. I am pleased to report that IJAD continues to attract important papers on various dimensions of Africa in the global society and economy. As of today, IJAD papers have beenread widely across the world showing a total of over 21,000 downloads and over 10,000 just in the past year according to the ScholarWorks counter: http://scholarworks.wmich.edu/ijad/

This issue features six papers that include positions on African states and institutions on the challenge of global climate change, China's role in African development as non-zero or positive engagement, whether sub regionalism within the African Union enhances regional integration in Africa, an economic analysis of asymmetric benefits of the Ethiopia-Eritrean common market during 1991-1998, a case study of rural women and the land rights question from Zimbabwe, and a history of tsetse fly control methods and its effects on climate change in the process of distribution.

The first paper on Africa in global climate change governance concludes that African states have managed to negotiate individually and as a group in recent years but that challenges remain. The paper on asymmetric economic relationship between Ethiopia and Eritrea shows that distribution of costs and benefits was biased against Ethiopia and unwisely accepted which eventually led to the devastating war from 1998-2000 that led to the loss of at least 70,000 lives and millions in property, and that the conflict between the two regimes is still not resolved. Tsetse flies affect 37 countries, over 70 million people and 50 million cattle in Africa, according to the World Health Organization that has raised hopes for eliminating the human African trypanosomiasis (HAT) disease. The paper offers suggestions for ways of alleviating future effects on human-tsetse contact resulting from changes in climate, land use and population movements.

With these brief remarks on six papers, I invite readers to read and draw their own policy implications.

Sisay Asefa, PhD, Professor of Economics
Editor in Chief of the *International Journal of African Development*

Africa in Global Climate Change Governance: Analyzing Its Position and Challenges

Anwar Hassen Tsega[1], Marmara University, Istanbul, Turkey

Abstract

Climate change has emerged as a major global issue that affects all nations and has become a phenomena requiring global governance in the modern globalized world. Though the African contribution to the increase Greenhouse Gas (GHG) is very small, climate change is a concern of African countries. This paper is aimed to analyze the African position and challenges in the governance of climate change. Nonetheless, there are opportunities created for adaptation and mitigation, the implementation of these measures is constrained by lack of financial, institutional and human capacities. Accordingly, the Africans position in the international system and lack of the capacities required for meaningful engagement leads to a challenge to participate effectively in global climate change negotiations. Despite numerous internal difficulties facing the African countries in climate governance and negotiations, this paper argues that African countries have shown an improvement in response, and willingness to cooperate and participate compared to previous times. Especially, in recent years, African states have managed to negotiate more effectively, both individually and as a group.

Keywords: *Africa Group of Negotiators, negotiations, climate governance, climate change.*

Introduction

The issue of environment truly emerged onto the international political agenda at the 1972 UN-run Stockholm conference; however, it was only in the latter decades of the twentieth century that environmental problems came to be recognized as more than local or even regional. Though environment in general and climate change, in particular, is a global problem that requires global solutions, its impacts require the active involvement of multiple national and local-level stakeholders in shaping and implementing the solutions. Accordingly, global climate governance, or the purposeful mechanisms and measures aimed at steering social systems towards preventing, mitigating, or adapting to the risks posed by climate change (IPCC, 2014), has come to be one of the central themes of debate and concern among different academic, political and economic domains. Climate change governance takes into account principles of accountability, management and institutional strengthening which are applied when tackling the various challenges posted by climate change. It also includes a wide range of steering mechanisms ranging from informal cooperation between different institutions and actors to hierarchical forms of regulation. Therefore, climate change governance can be described as a wide variety of

[1] PhD. Candidate – at the Department of International Relations.

coordinating methods contributing to the adaptation and mitigation of climate change (Knieling, & Filho, 2013).

Unlike the recent trend, climate change has had little relevance to development policy-makers or practitioners, and has been viewed largely as an environmental concern, and development approaches have been given less attention within the climate change community. According to Makina (2013), climate change will interact at all scales with other trends in global environmental and natural resource concerns, including water, soil and air pollution, health hazards, disaster risk, and deforestation. Moreover, as Madzwamuse (2010) mentioned, due to its predicted impacts on biodiversity, rural livelihoods and national and global economies, since the early 1990s, climate change has emerged as a critical development issue. Similarly, climate change is a concern of African countries; however, they might reach compliance but agree differently on the global provisions towards addressing the global environmental problems. Studies have shown that African contribution to the increase in Greenhouse Gas (GHG) is very small when compared to that of other more developed continents; however, they are definnitely victims of the climate change consequences. Recently, this has been verified at the Lima Climate Conference by the UN Secretary General, Ban Ki-moon (2014) who stated that "Climate change affects us all, but it does not affect us all equally. The poorest and most vulnerable, those who have done the least to contribute to global warming, are bearing the brunt of the impact today." This paper is primarily concerned with climate change governance and humbly tries to examine and analyze the position of the African group in international climate politics by examining what the African group has been saying regarding climate politics. The emerging literatures on the topic was used to develop some preliminary hypotheses on the conditions under which all could expect to enhance the African position on global climate politics. Accordingly, the paper found that in Africa, climate change creates opportunities to support climate change response in adaptation and mitigation. However, Africa has policy and funding challenges for both adaptation and mitigation. African countries have become much more proactive during the UNFCCC negotiations since the early 2000s. A number of quantitative measures were utilized including submissions, delegation size, and so on, and qualitative assessments by those within the AGN itself and beyond demonstrating that participation has increased substantially.

In this paper, an introduction is followed by a section that briefly reviews the nexus between climate change and development in Africa. The third section presents the empirical assessment of the position and challenges of Africa in international climate change politics. This section has two sub-sections. The first will focus on the African initiatives and their demands, the role of different institutions contributing to the Africa Group of Negotiators (AGN's) work and the African common position negotiation strategies. The second sub-section will focus on the 1) African position in mitigation policy debate and responses; 2) African group's position before the Lima climate conference; 3) African group's position at the Lima climate conference; and 4) the challenges facing the African group during the negotiations. A final section concludes by summarizing the main findings and pointing out future implications.

Climate Change and Development in Africa

Here is an attempt to address the relationship between climate change and development in the African perspective. Until recently, climate change has little relevance to development policy-makers or practitioners. According to Madzwamuse, M. (2010), climate was viewed largely as an environmental concern and development approaches have been given less attention within the climate change community, which instead favors natural science approaches focusing on reducing greenhouse gas emissions. However, climate change has emerged as a critical development issue since the early 1990s due to its predicted impacts on biodiversity, rural livelihoods and national and global economies. In addition, it was found in the recent initiatives to strengthen links between climate change and development communities, and experts can no longer ignore the fact that most climate change impacts will fall predominantly on the world's poorest people. Recently, this has been verified at the Lima Climate Change Conference, 2014, by the UN Secretary General, Ban Ki-moon.

There have been three conferences held on Climate Change and Development in Africa (CCDA) and each conference presents an opportunity for stakeholders to deliberate on Africa's development in the context of climate change. These conferences have the theme of advancing knowledge, policy and practice on climate change and development. The third conference was held in 2013, and created forums for dialogue that raised awareness of the importance of climate change, its impacts on development, and the nexus between science, policy and practice. The findings of the conference showed the need to mainstream climate change through development policy planning, programming and implementation. Accordingly, the conference did not pass without mentioning the imperative which is clear and shows that climate change is a threat and an opportunity (CCDA_III, 2013) .

Analyzing the Position and Challenges of the African Group in the Global Climate Change Politics

This paper argues that African countries have shown an improvement in response, and willingness to cooperate and participate in climate control compared to previous times. This section will have three main parts: 1) The position of the African group in mitigation policy debate and responses; 2) The position of the African group in global climate change negotiations; and 3) The challenges facing the African group during the negotiations. Before engaging in looking at these issues, it is necessary to review the regional initiatives and institutional contributions to the African Group of Negotiators (AGNs) and some of the African demands related to climate change.

African Initiatives on Climate Change

For more than a decade, the world has been negotiating global agreements under the United Nations Framework Convention on Climate Change (UNFCCC). At the UNFCCC, a number of actors, groups and platforms are instrumental in the development of a consolidated African position. A Conference of the Parties, or COP, to negotiate climate change has been held annually since 1995. Though AU adopted its own Declaration on Climate Change and Development in

2007, the first time that it clearly expressed a common position was at the Copenhagen COP in 2009 when it put forward the 'African Common Position on Climate Change' that set the mandate for African negotiators (AU/AMCEN, 2009). This position was built on the core concept of 'environmental justice' and stated that adaptation is the highest priority for Africa, since the continent's greenhouse gas emissions are so small. The AU has followed various strategies and cooperated with a variety of actors on climate change issues, such as multiculturalism, bilateralism and regionalism (Ramsamy, Knoll, Knaepen, & Wyk, 2014).

The Role of Different Institutions Contributing to the Africa Group of Negotiators (AGN's) Work

The African Ministerial Conference on the Environment (AMCEN), initially formed in 1985, is a key platform involved in the process of presenting the African common position to the UNFCCC. AMCEN has played a key role in terms of improving coordination of the common African position. It has worked towards a common framework in which all climate change programs in Africa are merged. For example, the African common position of 2009 was updated at an AMCEN session and endorsed by the AU. AMCEN's African Group of Experts, the technical segment of AMCEN, has been instrumental in this respect. AMCEN provides technical input as well as political oversight to the AGN. The Conference of African Heads of State and Government on Climate Change (CAHOSCC) is the highest continental body for approving and endorsing the common position. However, CAHOSCC is also fragmented, which has impeded smooth functioning. Other key partners in supporting the Africa Group of Negotiators (AGN) are the United Nations Economic Commission for Africa (UNECA) and African Climate Policy Centre (ACPC) that have provided technical support to the AGN during the preparation for the UNFCCC negotiations. In order to support its capacity, the AGN is supported by other technical agencies such as the UN. Compared to the above-mentioned institutions which enable consultation and coordination at the continental level to prepare for negotiations and develop the common position, there are regional and sub-regional initiatives that have proven fragile in several instances of negotiating positions. In turn, incoherence in their respective negotiating positions has generally weakened the position of the AGN in the UNFCCC negotiations (Ramsamy et al., 2014) .

The African Common Position and Some of Their Demands

As Roger and Belliethathan (2016) discussed in their article, the African common position on the African Environment and Development was announced at the Second Regional African Ministerial Conference for the United Nations Conference on Environment and Development (UNCED) held in Cote D'Ivoire in 1991. The 1991 conference, which marked the first occasion in which all African states officially addressed the issue of climate change as a group, established many principles that would become commonplace in African environmental diplomacy. For example, it asserted the priority of economic development, improvement of quality of life and the reduction in poverty over environmental considerations. It maintained that food and energy security were vital concerns for African governments and affirmed their sovereignty over the use of natural resources. In order to achieve sustainable development, the common position called for large financial transfers, transfers of technology and capacity building programs. According to Hoste (2010), the process of the African position started in 2006. In addition, their common position was initiated in 2008 in Algiers followed by the Nairobi Declaration in 2009 that resulted in the common position. However, they made the key demands of the African Group based on the Common Position of the Committee of the African Heads of State on Climate Change (CAHOSCC) (Hoste, 2010). These include:

a) Financial compensation for natural, economic and social resources that have been lost and the historical responsibility of developed countries on climate change in that respect (the financial commitment of developed countries should be at least 1.5% of their global GDP).
b) The UNFCCC principle of common but differentiated responsibilities should be respected.
c) Methodological demand: the African group wanted to keep the two track negotiations. This meant they wanted to keep the distinction between the Kyoto Protocol and the Convention.
d) That developed countries needed to reduce their greenhouse gas emissions by at least 40% below 1990 levels by 2020. By 2050 the GHG-emissions of developed countries should be at least 80% to 95% below 1990 levels. In order to achieve the lowest level of stabilization assessed by the IPCC's Fourth Assessment Report. Furthermore, Hoste (2010) noted that the African common position explicitly stipulated that they will not accept any delay by developed countries to deeply cut their GHG emissions and asked for support for Africa to adapt to the negative impacts of climate change.

The Position of the African Group in Mitigation Policy Debate and Responses

Under the African ministerial level conference, the climate change debate has primarily focused on adaptation rather than mitigation as historically Africa's contribution to global GHG emissions has been small - approximately 1.75% of global energy, CO_2 emissions from 1950-2000; and 3.85% of annual GHG emissions in 2000 (Winkler & Zipplies, 2009) (AMCEN, 2011). Therefore, understandably the focus amongst practitioners, particularly in the context of the UNFCCC climate negotiations, has been on attracting finance to build Africa's adaptive capacity. Whilst as a non-Annex 1 region, it is excluded from any quantified mitigation commitments under the UNFCCC, and therefore, less emphasis is placed on mitigation. Since Africa needs to develop economically to meet its priority of eradicating poverty, developing along a cleaner energy path, and moving towards low carbon development, mitigation will be necessary in order to maintain economic competitiveness in a global economy. The Africa Group has called on developing countries to undertake several key actions relating to mitigation. These include:

1) A science-based aggregate target for developed countries to ensure to individually or collectively reduce emissions in accordance with science, equity and historical responsibility;
2) Individual commitments that are negotiated among all Parties to ensure developed countries make adequate and equitable contributions to the Convention's objective;

3) Individual commitments that are binding in international law, not merely statements of intention, or commitments that are binding merely in national law;
4) Effective reporting on achievement of commitments;
5) Review and continuing commitments by developed countries during second and subsequent commitment periods; and
6) Mechanisms for compliance to ensure that developed countries fulfill their legally binding commitments in practice.

On the whole, the African Group insists on the elaboration of a detailed and clear work program for the Kyoto Protocol with the aim of adopting a final decision for the second commitment period in Durban in 2011. On policy approaches on issues relating to Reducing Emissions from Deforestation and Forest Degradation (REDD), African country parties are willing to undertake the following mitigation measures commensurate with their respective capabilities and national circumstances: a) Reduce emissions from deforestation; b) Reduce emissions from forest degradation; c) Conserve forest carbon stocks; and d) Sustain management of forests and enhancement of forest carbon stocks (AMCEN, 2011).

The Position of the African Group in the Global Climate Change Negotiations

Before engaging in examining the position of the African countries, it is necessary to understand how the African countries participate in the international climate negotiations. Therefore, according to Hoste (2010), one of the most important structural features of multilateral negotiations is the emergence of coalitions. Moreover, the analysis of the capacity of developing countries in multilateral negotiations would be incomplete without a section on the coalitions. African countries negotiate through the Group of 77 + China (G77), LDCs and through the Africa Group. South-South cooperation is particularly visible with the UNFCCC negotiations, with the most important developing country coalition being the G77. In addition, African countries participate in international negotiations through country groups and delegations that often negotiate in their own capacity and within these coalitions. According to Roger (2013), Africa’s climate negotiations are being strongly led by the Africa Group of Negotiators (AGN). One country is selected to chair the group for a period of two years and in January 2014, the Republic of the Sudan became its chair. The AGN’s structure consists of all African Member States’ senior officials, experts and negotiators in the UNFCCC negotiations with the African Ministerial Conference on the Environment (AMCEN) providing political oversight to the group. It represents the region in the international climate change negotiations with a common and unified voice. Since the Earth Summit in 1992, African states have participated in coalitions such as the G77, Alliance of Small Island States (AOSIS), and OPEC, and they have worked together as a regional group through the African Group of Negotiators (AGN).

From the literature we can understand that scholars, including Ramsamy, Knoll, Knaepen and Wyk (2014) as well as Roger (2013) and Dongo (2011) argued to the effective participation of Africa as a group in the international climate change negotiations. As Dongo argued, in the interest of a fair and equitable global response to climate change, Africa’s active and influential role in the climate change negotiations must be sustained. As African participation continues to grow, strategies and resources need to be made available to create a space for many that will help build a much stronger African voice. Therefore, the reasons for the effective participation as a group in international climate change negotiations include (IISD, 2014):

1) Over the past five years, African negotiators have been able to considerably improve their access to material resources, allowing them to increase the size and quality of their delegations.
2) African negotiators have sought resources from a variety of international donors and multilateral institutions. For example, at the request of the chair of the AGN, the African Development Bank (AfDB) started to provide funding in 2008 for African delegates to participate in the UNFCCC negotiations.
3) African states have improved their access to information and expertise.
4) African delegates have been able to negotiate with a much clearer mandate from African leaders in recent years.

Furthermore, as other scholars such as Ramsamy, Knoll, Knaepen and Wyk (2014) argue, Africa in recent years shows a consistent effort to formulate common positions ahead of key moments in the global agenda. Creating the African Common Positions involves both technical and political input from various African actors, organizations and platforms. African negotiators often seek to form international partnerships to push their agenda forward. Accordingly, from the discussions, we can understand that African's internal challenges, especially before the last five years, were the cause for its ineffective participation in global climate change politics. However, recently it is easier to agree with those who argue that the African group is showing effective participation in international climate negotiations.

African group's position before the Lima climate conference.

Though the 1991 Cote d'Ivoire's regional ministerial conference marked the first occasion in which all African states officially addressed the issue of climate change as a group, until 2006, African states had submitted more than 20 submissions and agenda items. Beginning around 2005, however, as the effects of Africa's lack of influence became particularly apparent, the AGN slowly started to have a greater impact on the UNFCCC negotiations. From 2007 onwards, African countries submitted less than 40 agenda items. Furthermore, in 2011 at COP17 in Durban, they put forward about 100 submissions and agenda items, a number roughly equivalent to the total submitted between 1991 and 2005. Indeed, after 2009, the number of AGN submissions even dwarfed those of the G77/China, reversing a trend that had prevailed since the UNFCCC's early years when the G77/China dominated (Roger & Belliethathan, 2016). As Roger and Belliethathan (2016) and Ramsamy, Knoll, Knaepen and Wyk (2014) recently discussed, African participation in the UNFCCC has improved as demonstrated in the following conferences:

- *At the 2006 COP12***:** COP12, which took place in Nairobi in 2006, proved to be a turning point. As the first COP to take place in Sub-Saharan Africa, the meeting offered an ideal opportunity to call attention to the region's concerns in front of a global audience. It also helped to raise the issue's salience among African leaders. As a result, more resources were devoted to the talks, and African negotiators made significant efforts to develop a common position that would adequately reflect Africa's urgent needs. The meeting enabled Africa's negotiators to reach a consensus on several issues, not only on adaptation and the Clean Development Mechanism (CDM), but also deforestation, climate finance and technology transfer. As a result of the AGN's efforts, the conference achieved two important outcomes meant to address some of the major issues it had identified. The first was the Nairobi Work Program on Impacts, Vulnerability and Adaptation to Climate Change which sought to improve capacity building related to adaptation decision-making in LDCs. The second was the Nairobi Framework - aimed to facilitate participation of under-represented countries in the CDM (Reger & Belliethathan, 2016).

Similarly, Ramsamy; Knoll; Knaepen and Wyk (2014) scrutinized the positions of the African group before the Lima climate conference:

- *In the run-up to COP 15:* In subsequent negotiations, African efforts to influence the negotiations grew substantially, especially during and after COP15 in Copenhagen. During this conference African country showed more willingness to act jointly, and they argued that Africa was one of the most united groups at COP 15 articulating its position very well as a result of polishing the common position. The proposal of a "common responsibility framework for mitigation" put forth by developed countries was perceived by Africa as blurring the distinction between the commitments of developed countries and those of developing countries, as laid down in the earlier mentioned CBDR-principle. Sudan, for the Group of 77, and China, G-77/China, called upon parties to observe the principles of good faith, transparency, inclusiveness and openness. Africans are already impacted by climate change through increased droughts, health hazards, food scarcity and migration. The African representative called for transparent and equitable negotiations during the high-level segment.
- *At the 2010 COP 16*, held in Cancun: African political leaders showed significant differences, especially among regional powers, whereas technical negotiators appeared united. It was nearly impossible to consolidate the political and technical positions.
- *At the 2011 COP 17,* in Durban: An African flagship partnership was created. This was the first time Africa had a dedicated platform at the conference for high-level engagement. This partnership was the result of preparation for the COP and support from continental institutions including the African Development Bank. At this conference, African countries put forward about 100 submissions and agenda items.
- *During the COP19,* held in Warsaw in 2013: Africa presented a common position. The African Group of Negotiators (AGN) pointed out that historical responsibility in greenhouse gas emissions as well as loss and damage should be addressed. As a result, a Warsaw Mechanism for Loss and Damage was established. This addresses loss and damage

associated with the impacts of climate change, including extreme events in the most vulnerable developing countries.

African group's position at the Lima climate conference.

Though the current chair of the African group is from the Republic of the Sudan, during the Lima climate conference, it was observed that countries like Swaziland, Kenya, Ghana and Ethiopia spoke on behalf of the African group. In this section, the paper scrutinizes the position of the African group with some other countries' positions for the sake of comparison. At the COP20, held in 2014 in Lima, substantive negotiations took place on the seven elements of: finance; adaptation; mitigation; cooperation and support; transparency of action and support; technology; and capacity building (IISD, 2014):

- *Finance:* on differentiation, Sudan, for the African Group, with Ecuador and Bolivia, for G-77/China opposed text suggesting "all" parties mobilize climate finance through a diversity of actions. The African Group recalled differentiation between developed and developing countries under the Convention, and the responsibility of developed countries to provide finance. Mexico clarified that "results-based" is not a precondition for access to finance, and stressed prioritizing both mitigation and adaptation finance. The EU clarified that "evolving responsibilities and capabilities" captures the growth in the levels of prosperity and GHG emissions of developing countries, noting that some are currently more prosperous than some EU member states. However, on Thursday, 4 December, Sudan, for the African Group, supported by Bolivia, for the G-77/China, Saudi Arabia, Maldives, India, South Africa, Ecuador, Zambia, Pakistan, Argentina and others introduced a conference room paper (CRP) containing draft elements of climate finance under the ADP, requesting that it replace the Co-Chairs' non-paper as the basis for discussion.
- *Adaptation*: On loss and damage, the African Group and others, opposed by Australia, emphasized that it should become a stand-alone element in the new agreement. New Zealand opposed any reinterpretation of Decision 2/CP.19 (Warsaw International Mechanism for Loss and Damage).
- *Mitigation*: On differentiation, Kenya, for the African Group, lamented the overall lack of reference to equity, CBDR, mitigation obligations of developed countries, and specific national and regional development priorities. The EU said the text should reflect that all parties will eventually take quantified economy-wide emission reduction targets. The US called for an option in the text to update the Convention's annexes to reflect parties changing economic and emissions trends.
- *Cooperation and Support*: Many parties supported consolidating the section on cooperation and support with sections on other elements.
- *Transparency of Action and Support*: South Africa, supported by Mexico, proposed launching a process for discussing transparency rules during 2015, with South Africa says this should be reflected in the ADP conclusions from Lima. The African Group, South Africa, Chile, Panama, Nauru, Brazil and Mexico called for building on the existing

measuring, reporting and verification (MRV) framework, with some suggesting it could evolve over time. The African Group cautioned against placing additional burdens on developing countries. Argentina, the LDCs, the African Group, Saudi Arabia and China emphasized differentiation, with many calling for maintaining the existing "two-track" approach to MRV.

- *Technology*: Swaziland, for the African Group, said that commitments should not shift responsibility from developed to developing countries, nor encourage private over public support. On institutional arrangements, Swaziland, for the African Group, Saudi Arabia, South Africa, Algeria and Argentina preferred anchoring institutional arrangements in the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN).
- *Capacity Building:* Regarding institutional arrangements, South Africa, China, India, Iran, Tanzania, Tuvalu for the LDCs, and others were opposed by Canada, Japan, the EU, the US and others in regard to supporting the establishment of an international capacity-building mechanism. India noted that mobilization of private capital cannot be one of its essential elements. Switzerland, for the Environmental Integrity Group, the EU, Belize, Chile for AILAC, Australia, New Zealand, Japan, Belarus, the Russian Federation, and Turkey endorsed the Co-Chairs' text. Sudan for the African Group, Malaysia for the LMDCs, Saudi Arabia, Argentina, India, Uganda, Paraguay, Pakistan and others were opposed to the text. The African Group stressed the importance of the principles of the Convention; the concept of differentiation, cautioning against undermining it implicitly or explicitly, adaptation as Africa's priorities, and equal and balanced treatment of these elements alongside mitigation and transparency. Noting that the gap is gradually closing, Nigeria asked parties to address issues raised by the African Group. Calling the text unacceptable in its current form, the Democratic Republic of the Congo identified areas not addressed, including: parity among the elements, differentiation, scope of INDCs beyond mitigation, and work stream 2 (pre-2020 ambition).

The Challenges Facing the African Group During the Negotiations

Historically, as Roger (2013) discussed, delegations from Africa have faced challenges related to participating effectively in global climate change negotiations as a result of their position in the international system and a lack of the capacities required for meaningful engagement. In recent years, African states have nevertheless managed to negotiate more effectively, both individually and as a group. Critical to this has been efforts to gain access to material resources and better information, as well as clearer mandates from African leaders. On the other hand, other scholars Ramsamy et al (2014) argue that some of the main causes of fragmentation within the group are policy positions on climate change, which vary according to environmental and political priorities as well as the ways states are classified. For example, within the Group there is the Organization of Petroleum Exporting Countries (OPEC) that places emphasis on response measures. There is also the Small Island Developing States (SIDS) that are pushing for all large

GHG emitters to take more responsibility in reaching the 2 degree limit in temperature, while the Least Developed Countries (LDCs) have a particular interest in finance, technology transfer and adaptation. Within this mix, South Africa stands out, not only as one of the continent's largest economies, but as a significant contributor to GHG emissions.

Moreover, the challenge facing South Africa is that it is part of the AGN, but at the same time, it is also aligned with other geopolitical groupings including the BASIC that includes Brazil, South Africa, India and China. The BASIC group was established in 2009, initially to promote the Copenhagen Accord and to promote the interests of the G77 with regards to GHG emission reduction commitments. These all pose a challenge that Africa as a continent is still working through. Similarly, Mekina (2013) mentioned the challenges of African countries during the negotiation in international climate change politics. The following could be a typical example:

- *Delegation Size:* Many African country delegations are comprised of fewer people than those of more developed countries.
- *Delegation Composition:* African delegations habitually negotiate in isolation without sufficient support from their countries. Richer delegations may be accompanied by policy makers and scientists who can decipher the complex technical language, its implications to national priorities, and provide supporting evidence.
- *Lack of Negotiating Experience:* Many country negotiators are not familiarity with how negotiations are done.
- *Science versus Diplomacy:* Many country negotiators lack research to support their positions.
- *Other Technical Issues:* There are technical challenges specific to some African country delegations. These include slow or lack of Internet, which limits access to networks that can serve as information resources and powerful contacts.
- *Politics of the Africa Group:* As with all diverse negotiating coalitions, the Africa Group is not immune to politics.

Conclusion

This paper attempted to examine the position and challenges of the African countries in international climate change politics. Though studies have shown that African contribution to the increase in Greenhouse Gas (GHG) is very small, they are definitely victims of the climate change consequences. Climate change has emerged as a critical development issue since the early 1990s due to its predicted impacts on biodiversity, rural livelihoods and national and global economies. Accordingly, climate change is a concern of African countries; however, they might comply and agree differently on the global provisions towards addressing the global environmental problems. Therefore, the paper has analyzed the position and challenges facing the African countries for the governance of climate change, addressed this issue in the third section of the paper that is organized as: 1) the African position in mitigation policy debate and responses; 2) the African group's position before the Lima climate conference; 3) the African group's position at the Lima climate conference; and 4) the challenges facing the African group during the negotiations.

The paper argues that both adaptation and mitigation have opportunities and challenges. To utilize the opportunities effectively and to reduce the negative effects of climate change, strengthening the institutional capacities will be the first thing to be considered in our mind. For this, there have been institutions that have initiatives, plans and strategies to respond to the challenges arising from climate change. However, the implementation of these measures is constrained by inadequate financial, institutional and human capacities. Africa needs to have an effective voice at international climate conferences and influence on the global agreement that will emerge to ensure that development and poverty reduction agendas are included in the outcome and follow-up action at national, regional and global levels.

As was discussed, the UNFCC instruments for capacity building, finance and technology transfer have presented the main opportunities for the participation of African countries. As a result, African countries have become much more proactive in UNFCCC negotiations. A number of quantitative measures, including submissions, delegation size, and qualitative assessments by those within the AGN itself and beyond, demonstrate that participation has increased substantially. Conferences of the Parties, or COPs, to negotiate climate change have been held annually since 1995. The AU adopted its own declaration on Climate Change and Development in 2007, and it clearly expressed a common position at the Copenhagen COP in 2009 when it put forward the African Common Position on Climate Change that set the mandate of African negotiators.

One of the most important structural features of multilateral negotiations is the emergence of coalitions. Accordingly, African countries negotiate through the Group of 77 + China (G77), LDCs and the Africa Group. Africa's climate negotiations are currently being strongly led by the Africa Group of Negotiators (AGN), an alliance that consists of climate change negotiators from every African country. The paper scrutinizes the African group's position in the previous conferences as well as in the Lima climate conference. Before the Lima conference, in terms of polishing the common position, Africa was one of the most united groups at COP 15, articulating its position very well. Moreover, at the Durban Conference an African flagship partnership was created. This was the first time Africa had a dedicated platform for high-level engagement at the conference.

At the COP 20, held in 2014 in Lima, substantive negotiations took place on seven elements: finance; adaptation; mitigation; cooperation and support; transparency of action and support; technology; and capacity building. At this conference, African countries, including Sudan, Kenya, Swaziland, and South Africa for the African Group, passionately expressed the overall lack of reference to equity, CBDR, mitigation obligations of developed countries, and specific national and regional development priorities. The African Group also said that commitments should not shift responsibility from developed to developing countries, nor encourage private over public support. Similarly, they stressed the importance of the principles of the convention, the concept of differentiation, the cautioning against undermining implicitly or explicitly, the adaptation as Africa's priority, and equal and balanced treatment of these elements alongside mitigation and transparency. Historically, the Africans position in the international system and lack of capacities required for meaningful engagement led to a challenge to participate effectively in global climate change negotiations. However, in recent years, African states have managed to negotiate more effectively, both individually and as a group. The reasons for the effective participation as a group in international climate change negotiations include improving their access to material resources, and improving their access to information and expertise that enable them to negotiate with a much clearer mandate. Apart from the UNFCC finance provisions of the AGNs, the African Development Bank has also contributed a significant role in the AGNs work. The principle of equity, which the African groups framed, has led them to participate effectively in global climate change negotiations.

However, the paper also identified some of the problems facing the group. Fragmentation within the African Group has been one of the challenges, and the main causes are policy positions on climate change, which vary according to environmental and political priorities as well as the ways states are classified. Besides, the challenge facing South Africa in negotiation is that it is part of the AGN, but at the same time, it is aligned with other geopolitical groupings including the BASIC countries of Brazil, South Africa, India and China. Other challenges facing African countries during negotiations include delegation size, delegation composition, lack of familiarity of how negotiations are done, lack of research based on science and diplomacy, and lack of immunity from politics.

References

AMCEN. (2011). Addressing Climate Change Challenges in Africa; A Practical Guide Towards Sustainable Development. Retrieved from https://www.reeep.org/sites/default/files/Guide%20Book%20-%20Addressing%20Climate%20Change%20Challenges%20in%20Africa.pdf

Dongo, L. (2014). Negotiating Africa's Interests on Climate Change: The African Group of Negotiators. Retrieved from https://climate-exchange.org/2014/03/13/negotiating-africas-interests-on-climate-change-the-african-group-of-negotiators/

Hoste, J. C. (2010). Where was united Africa in the climate change negotiations? *Africa Policy Brief*. Belgium: Egmont Royal Institute for International Relations.

International Institute of Sustainable Development (IISD). (2014, Deccember 1-12). *Earth Negotiations Bulletin 12*(619). Retrieved from http://www.iisd.ca/climate/cop20/enb/

IPCC. (2014). Annex II: Glossary. In K. J. Mach, S. Planton and C. von Stechow (Eds.), *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, pp. 117-130. Geneva, Switzerland: IPCC.

Ki-moon, B. (2014). Climate Summit 2014: Opening ceremony. Downloaded from http://webtv.un.org/watch/ban-ki-moon-climate-summit-2014-opening-ceremony/3801078861001

Knieling, J. and Filho, W. L. (2013) Climate change governance: The challenge for politics and public administration, enterprise and civil society. In J. Knieling and W. L. Filho (Eds.), *Climate Change Management*. Frankfurt: Springer-Verlag Berlin Heidelberg.

Madzwamuse, M. (2010). Climate governance in Africa: Adapation strategies and ınstitutions. *Heinrich-Böll-Stiftung (HBS)*. Retrieved from https://www.boell.de/en/ecology/africa-climate-governance-in-africa-adaptation-strategies-and-institutions-10914.html

Makına, A. (2013). Managing Climate Change: The Africa Group in Multilateral Environmental Negotiations. *Journal of International Organizations Studies, 4*, 36-48.

Ramsamy, R., Knoll, A., Knaepen, H. & Wyk, L.V. (2014, November). How does Africa speak with one voice? Africa's evolving positions on aid effectiveness, climate change and the post-2015 goals. *European Centre for Development Policy Management. No. 74*.

Roger, C. (2013). African Enfranchisement in Global Climate Change Negotiations. *Africa Portal Backgrounder, 57*.

Roger, C. & Belliethathan, S. (2016) Africa in the global climate change negotiations, *International Environmental Agreements: Politics, Law and Economics, 16*(1), 91–108.

Third Conference on Climate Change and Development in Africa (CCDA_III). (2013). Africa on the rise: Can the opportunities from climate change spring the continent to transformative development? Addis Ababa, Ethiopia. Retrieved from http://www.climdev-africa.org/ccda3

China and Post-Millennium African Economic Development Strategy as a Non-Zero-Sum-Game[2]

Paulos Milkias, Concordia University, Montreal, Canada

Abstract

This paper will probe Africa's and China's historical trajectory regarding economic development. It analyzes China's and Africa's creative leap, particularly since the millennium, into a new paradigm, a new way of economic relationship totally different from that with the West. The focus is on analyzing China's heavy economic investment in Africa based on the assumption that the relationship is mutually beneficial rather than being exploitative as some scholars suggest. The hypothesis draws from Decision Theory's concept of a Zero-Sum Game. It is understood that in a two partnered non-zero sum game theory, one partner's gain or loss does not necessarily result in the other partner's loss or gain. In other words, a non-zero-sum game depicts the winnings and losses of all partners as not adding up to zero but rather as a win-win deal for both. The same scenario explains China's heavy involvement in contemporary African economic development and the latter's ready acceptance of the Middle Kingdom's gargantuan investment ventures in Sub-Sahara Africa that pales those of former colonial countries and all highly developed democratic regimes of the West. This paper provides data for Chinese investment in Africa and its concomitant spinoffs for both stake holders. It highlights the economic development gains in Sub-Sahara Africa since the millennium, how much of it was spawned by China's heavy investment, and what China expects in return. It also draws attention to great power rivalries that have ruffled the feathers of former colonial powers and other Western countries that construe the entire enterprise as a Sino-imperialist venture. The paper then tries to fetter out the cost-benefit to both partners in terms of Chinese investment in contrast to Beijing's dire need for Africa's abundant natural resources to keep running its unprecedented growth that has already made it the largest global economy purchasing power parity (ppp) wise, surpassing what had been hitherto an unchallenged economic powerhouse, the United States of America.

Introduction

In mainstream scholarly discourse, there is no distinction between Western and China's economic involvement in Africa. For many Western analysts, both are construed as being imperialistic or neo-imperialistic (Habiyaremye, 2013). But for progressive African scholars, the economic relations with the Chinese signals the dawning of a new era (Parselelo, 2016). The dual West-China imperialism line of thought holds sway in spite of numerous facts to the contrary.

---

[2] A Paper Presented to the 9th International Conference on African Development held on May 29, 2016 at Addis Ababa University

Nevertheless, overall, Africa's and China's development continues to progress even as the latter's economic advancement decelerates slightly (Womack, 2013).

The dramatic fact that China has made an economic leap and has shown the ability to rise in thirty years from underdeveloped status and abject poverty to an enormous global economic powerhouse has drawn the attention of many leaders in Africa. And, Beijing's determined effort to develop Africa instead of simply exploiting its resources brought about a rapid paradigm shift in bilateral relations. For Africans, it was the first time that a foreign power's relation was not predicated on parochial economic and political interests of one partner alone, for China considers its own development and advancement as being inexorably linked to that of Africa. China is in fact, a beacon not only to Africa's but also to the entire Global South's economic development strategy.

The Chinese have empathy for Africans for good reason: they were also victims of imperialism and neo-imperialism in the 18th to early 20th centuries (Berman, 1974). Thus, instead of being fearful that a technologically developed Africa would compete with their multinationals, they reached a conclusion that Africa's development would be a dividend to both (Prabhakar, 2003). They correctly calculated that Africa with a population of over 1 billion, and with an exponentially growing middle class would afford them a huge market if developed. For China, the less developed both are the poorer they become. Its corollary, the more developed both are the richer they become also holds true in theoretical perspective. During the advent of the post-colonial era, North-South engagement was labeled Center Periphery relation whereas relation between the Global South came to be known as South-South relation (Marton & Matura, 2011; Sankore, 2005). Though, in both cases, there is an ingrained asymmetry. What is new about Beijing's ontology is that South-South development in which one partner has more to contribute to the advancement of the other should proceed in concert so that in the long run, both will reach technological and economic equilibrium.

During the previous five centuries, the West controlled the economic landscape in its relationship with Africa. China, however, adapted itself to the system in a novel way. What created a lopsided relationship in the first case was that the Africans supplied natural resources including minerals and agricultural commodities in return for finished goods from their dominant partners (Prabhakar, 2003). No tangible development and technological spinoff issued from that relationship (Holslag, 2007).

Looking back and reflecting on the status quo ante, some scholars have gone out of their way to equate contemporary China-Africa economic relation with the 1885 European scramble for Africa (Alden, 2005). But, what drove the Europeans into colonial expansion into Africa was easy exploitation of the abundant mineral wealth made possible with territorial conquests of the continent, and the vast market it provided. The Berlin Conference of 1885 was aimed at legitimizing this voracious economic appetite of colonial Europe (DeLorenzo, 2007).

One thing that is clear in Western style discourse is that Africa's historic trajectory is pre-set. Furthermore, China's quest for African minerals and the attendant infrastructure development, exacerbated by heavy reliance on Africa by China for fueling its domestic industrialization needs, have been construed as a new form of colonialism (Girouard, 2008). On the contrary, many African scholars see China's growing interaction with Africa as a positive development Sanusi, 2013).

Many scholars of the West who look more critically at China's involvement in the continent see simply a mirror image of Africa's colonial past (Durden, 2012). Some who are moderate refrain from labeling the relationship imperialistic or neo-imperialistic, but nevertheless question whether China's investment in Africa is really altruistic or truly a new avenue for South-South cooperation (Quinn, 2011). Both groups agree that, to some extent, the Chinese practice of importing unprocessed primary commodities from Africa and exporting manufactured goods to the continent exhibits an essence of neo-colonialism. They warn Africa not to open itself up to China, and that such a trade structure is likely to prevent African economies from upgrading their industrial sector (Mbeki warns Africa, 2006). This is of course wide speculation and is not supported by tangible evidence.

Africa has developed more since its symbiotic connection with China in the last ten years than during the previous centuries of colonialism and neo-colonialism. Despite this, some scholars have even gone to the extent of claiming that "[Africa] has now become de facto Chinese territory" (Burkam, 2001). The allegation continues with official support from Western governments. For example, during a tour of Africa in 2011, the then U.S. Secretary of State, Hillary Clinton, castigated China as a power bent on unleashing "new colonialism" on Africa (Law, 2006).

This accusation against China is not limited to Western politicians and scholars. Surprisingly, some prominent African statesmen who have been misinformed have also aired an alarm. Thus, the former President of South Africa, Taboo Mbeki, has gone out of his way to remind his colleagues that they should not forget the advent of the last several hundred years when the European imperialists unleashed on the continent blatant exploitation and enslavement, dominating it economically, politically, and psychologically. He then sternly warned African leaders to "guard against falling into a colonial relationship with China" (Rodney, 1973). The author believes that this is a totally misplaced myth and will attempt to prove why.

The Setting

Despite the most recent slowdown in its growth, China's economic leap and its ability to rise in thirty years from underdeveloped status and abject poverty to an enormous global economic powerhouse has drawn the attention of many leaders in Africa. For a variety of reasons, China has shown a serious desire to export its methods of success to the least developed continent of Africa, and African leaders have been more than ready to jump from the tight clutch of the former colonial and imperialist powers into the uncharted orbit of the Middle Kingdom.

Much as the West dominated the economic landscape in its relationship with Africa, China decided to launch an entirely new system. It is true that in both cases there is a certain element of disparity; that is, there is a certain element of asymmetry. What created a lopsided relationship was that in both cases, the Africans supplied raw materials in return for buying finished goods from the stronger partner. But, it is hard to draw a parallel between European and Western relations with Africa and with China's current relationship with the continent. What drove the Europeans into colonial expansion into Africa was simply the abundance of mineral wealth that they aimed to secure by territorial conquests in total disregard of the needs of the African inhabitants of the day. The Berlin Conference of 1885 was aimed at legitimizing this voracious economic appetite. In the contemporary relationship, China benefits by acquiring the abundant natural resources of Africa including agricultural products, oil and base metals such as copper. Whereas, Africa gets not only finished goods at cheaper prices that the West cannot match, but most importantly, provides development loans at low interest or no-interest, technology transfer, and Chinese funded infrastructure development which is glaringly being seen in the myriads of roads, airports, railways, dams and electrical grids springing up all over Africa that transform even resource-poor, hunger ridden and derided as "basket case" countries such as Ethiopia into a rising North-East-African giant with double digit growth.

Early Chinese Encounters with the Continent of Africa

What was China's relation with Africa while the Europeans were plundering it? The Middle Kingdom's first contact with Africa has been traced as far back as 200 BC when China and Africa had trade relations through the Silk Road (Gamora & Mathews, 2010). It was the Chinese admiral Zheng He who, during the reign of the Ming Dynasty of the 15th century, led expeditions to Africa, nearly a century prior to the Portuguese arrival in India, by sailing around the Cape of Good Hope.

Zheng embarked from China in 1413 and a detachment of his naval contingent called on Egypt to the North and then traveled south to the east coast of Africa. The contingent visited the coast of present day Somalia and Kenya and advanced as far as the vicinities of the Mozambique coast (Levanthes, 1994). On his journey back to China in 1415, Zheng's detachment was accompanied by ambassadors of over 30 countries, many of them from Africa's riparian nations. The ambassadors met the Chinese emperor and returned upon the accomplishment of their mission. Zheng's seven trips to Africa and the territories nearby went on until 1433 (Voyages of Zheng He, 2005). During this time, the Chinese never showed any interest in establishing colonial territories in Africa.

Ironically, Zheng, China's seasoned diplomatic envoy, was rebuked by European historians for not carrying out what leaders of similar voyages of European merchant-adventurers carried out during the following centuries. The latter set up trading empires that would in time develop into colonial territories straddling the length and breadth of Africa (Lo, 2016). In terms of economic relations, during the Zheng's visit with a fleet of 300 ships, Chinese porcelains, silk, and fabrics were exchanged for African aromatics such as myrrh and exotic African animals. No colonialism was ever anticipated. China still retains the unforgettable legends surrounding that famous peaceful naval crusade, and the diplomatic finesse that accompanied it. Instead of barbaric loot and wide scale devastation that was to accompany European incursions a century later, the Chinese of the early 1400s left behind an enduring message of peace and brotherhood regarding their motivations. In fact, the Chinese encounter with Africa in the 1400's was a far cry from the experience under

European occupation: it was a peaceful foray of egalitarianism and respect of sovereignty and territorial integrity, and not one of conquest and plunder.

China's Economic Growth as a Beacon for Africa

While Africa continued to suffer from the effects of its exposure to the IMF's and the World Bank's Structural Adjustment regime and the exploitative relationship with the West's multinationals which kept it burdened with debt and poverty, China was economically booming. But there was a stop gap prior to this. This concerns the economic downturns that China suffered between the 1950s and 1970s which resulted more from the radical application of revolutionary programs such as *the Great Leap Forward* and *The Cultural Revolution* as well as a poor incentive mechanism in place than from the paucity of advancement potentialities (Lieberthal & Lardy, 1987). African countries that may lack these potentialities need to learn from China and gain new capabilities that could help them move forward unencumbered by faulty structural snags. China's phenomenal performance came about following the modernization plans launched by Deng Xiaoping after the death of Mao Zedong in 1976 (Forster, 1992) and the successful containment of a radical group known as *The Gang of Four* which included Mao's wife Jiang Qing, and her associates Wang Hangmen, Yao Kenyan, and Zhang Chunkier, high level officials some of whom rose through the party ranks during the violent period of the Cultural Revolution (Forster). Deng's reforms known in general as "*The Four Modernizations*" unleashed an underlying economic capacity in China because the dynamic structure in the country had already been there.

China's economic leap and its capacity to progress in thirty years from underdevelopment and abject poverty to a major global economic powerhouse drew the attention of many developing countries, particularly those in Africa. Beijing's economic advancement seemed in fact miraculous: its annual GDP growth averaged 9.9% over a 30-year period since 1979. In 2010, China's GDP growth reached 10.5 percent. This constituted one-third of the entire planet's growth (Hasluck, 2005). While Africa's growth averaged 5.2 percent between 2000 and 2013, China's averaged 10.0 percent. Though China's growth has recently tapered off, its level is still first-rate, particularly at a time when advanced economies in Europe are facing severe crises. China's phenomenal economic growth within three decades has been undoubtedly remarkable. During that period, China has been able to raise an estimated 600 million people out of poverty. At the close of 2008, the poverty headcount dropped from 70 percent in 1984 to a mere 13 percent. The progress continued until poverty reached 10.2 percent at the end of 2012 (Anyanwu, 2014). If one considers the purchasing power parity (ppp), China has already become the largest economy on the entire planet. With a global market share of over 10 percent and rising, it has also become the largest exporter and manufacturer, and an ever more crucial engine of global growth. This is a unique development success story; providing valuable examples for Third World nations such as those in Africa who are eager to emulate Beijing's dramatic rise. As the following graph shows, China's percentage growth progressed from 2.5% in 1976 to between 8% and 11.5% between 1977 and 2016.

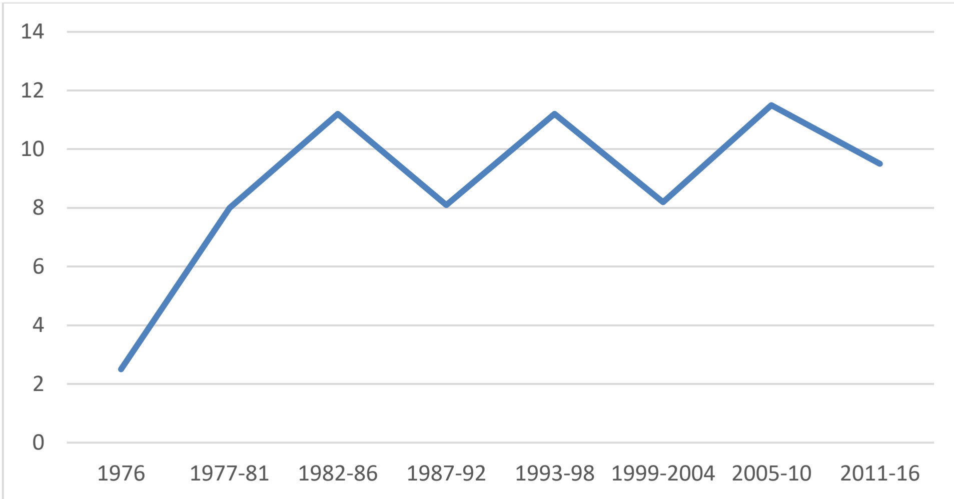

Figure 1 China's Percentage GDP Growth 1976-2016
Source: IMF Data, 1976 to 2016.

China's Economic Growth

Without doubt, China's economic growth within three decades has been remarkable. Indeed, despite its vast size and demographic advantage China needs global markets, suppliers and investment outlets, including in Africa. The World Bank stated in 2013 that China had moved up the rank of development thus becoming the world's second largest economy and accounting for 9.5% of the World's income (Anyanwu, 2014). There are several factors that contributed to China's dramatic economic rise on the globe. One key factor that fueled China's growth rate is international trade which was relatively open. China's trade openness ratio hovered around 43 percent between 1984 and 2010. The second is vast public investment in infrastructure. Third is investment in human capital that increased overall productivity. For example, from 1992 to 2016, China spent at least 8.5% of its annual GDP on infrastructure development (World Bank, 2016). In absolute terms, this investment was vast, topping any other region or country in the world, including the United States, the European Union, Japan, Canada, and Australia.

China's growth surge was transformed into considerable improvements in the standard of living of the Chinese people (World Bank, 2016). It is important to point out that in 1978, China's per capita income was no more than one-third of that of Sub-Saharan Africa. The impetus for China's economic growth is monumental. In three decades, China managed to pull its population from poverty to upper-middle-income status. Thus, it remains among the fastest growing economies in the world in spite of its apparent slowdown in the last couple of years.

Between 2015 and 2016, the Chinese economy grew at around 7%, which is by far higher than the growth rate of all Western countries including the United States and the European Union (World Bank, 2016). Furthermore, the economic essentials are still very robust in China, which has enormous financial reserves, macroeconomic stability, and a solid manufacturing base vital to sustained capital growth and economic transformation. That is why the Africans turned to China for inspiration (Adejumobi, 2015).

The decision by the IMF to include the Chinese *renminbi* (RMB) as an international reserve currency beginning in October 2016 has increased China's chance of playing a key role in global trade and the country's most recent decision to devalue its currency is bound to intensify Beijing's aggressive export strategy abroad, thus making its exports cheaper and further available on the global markets with different qualities of goods – from the below par types afforded by the poor to the higher valued ones coveted by the middle class and the rich. This has already started to ruffle feathers in the West (El-Erian, 2016).

China, Africa and Economic Development

Many African leaders have already recognized that repeating the Chinese growth model is not a straightforward phenomenon. Unlike China, Africa is far from being homogeneous. It is a continent of 54 sovereign states with divergent institutional background and different socio-economic conditions. Nevertheless, there are common elements and lessons African countries can draw from the Chinese model. Africans can see the key role of the state, domestic savings and investment, the requirements for institutional reforms, technological adjustments and increased innovation efforts, and open trade policies with varied exports towards manufacturing, public and private partnership as crucial. These lessons are already being used by some fast-growing African countries to shape growth strategies appropriate for unique conditions. Just as China started far behind Western developed countries and surpassed many of them, Africa can learn from Chinese's growth trajectory pattern, craft and use effective institutions, and introduce critical social and economic transformations and sacrifices to catch up to the West and China. For this, the continent has remarkable potential for sustainable development and gargantuan leaps forward. All Africans need to do is manage their resources skillfully. With that, some of what is now known as poor underdeveloped countries of Africa can end up being legitimate emerging markets that receive inflows of private capital and then serve as an engine of growth for others (El-Erian, 2016).

Africa's economic growth prospects depend on domestic investment, but if it wants to compete, it must do more: it must try to match China's domestic investment which is double that of Africa's. Africa also must try to attract net official development assistance inflows; it must improve the quality of its governance, expand educational opportunities for its youth, and invest more in urban and rural human capital. Compared with China, Africa imports primarily more consumer goods than it exports. Except for Beijing that is just the reverse. Also, the structure of Africa's exports is predisposed towards traditional primary commodity exports whereas China is now singularly focused on producing and selling manufactured goods.

The lynchpin of Sino-African relations is the *Forum on China-Africa Cooperation* (FOCAC) forged at the Ministerial Conference in Beijing in 2000. FOCAC has provided aid to Africa in many sectors particularly in agriculture, infrastructure development, and trade as well as human and natural resource development. It has helped with investment and aid the African countries have needed, and has offered debt relief particularly to needy countries. FOCAC has a multilateral platform for collective, pragmatic consultation and dialogue that were established cooperatively.

On the footsteps of the establishment of FOCAC in 2000, bilateral trade flows between China and Africa climbed to 200 billion in 2015. This is a huge jump from 5 billion US dollars recorded in 1995 that rose to 100 billion US dollars in 2009. Thus, China has now become Africa‘s third largest trading partner behind only the United States and the European Union. During that period, China’s imports from Africa went up by a whopping 1,380 percent!

Since the formation of FOCAC in 2000, Beijing has waived more than 2 billion US dollars in debt of more than thirty African countries and trained more than 10,000 African personnel in both civilian and security sectors. China has granted zero tariff rates for 190 products exported to China from Sub-Saharan Africa, and has engaged in peacekeeping operations in the Democratic Republic of Congo. The Chinese government has offered about 1,500 scholarships every year for Africans to study in China, dispatched around 16,000 medical doctors to work in the countryside and deployed 700 teachers to work in rural schools across the continent. China pledged a multi-billion-dollar development package to Africa during the 3rd Ministerial Conference of FOCAC. The development fund has amounted to: 5 billion US dollars to encourage Chinese companies to invest in Africa; the setting up of 10 agricultural technology demonstration centers on the continent over the next three years; the dispatching of 100 senior agricultural experts; and the forgiving of all interest-free loans owed by the most heavily indebted and low development African nations that matured at the end of 2005.

Historically speaking, FOCAC is simply a continuum from the spirit of the *Bandung Conference*, which was held in Indonesia in 1955. In both instances, what the participating nations had in common was a shared colonial and neo-colonial history, and a perception of Western spawned white dominance over non-white peoples of the world including Africans, Orientals and Latinos. The purpose of FOCAC is to bolster China-Africa strategic cooperation in today’s world governed by economic globalization that ought to be stable and sustainable. FOCAC affords a unique diplomatic device to promote discourse among five score African nations and China. It facilitates the development of a common political and economic agenda, which will advance productive South-South cooperation for shared benefit.

The first *Forum on China-Africa Cooperation* (FOCAC) was held in Beijing from 10 to 12 October 2000. It was accorded high priority by Beijing and was attended by President Jiang Zemin and Premier Zhu Rongji of the People's Republic of China. More than 80 ministers from China and 44 independent African countries, many of them represented by heads of state, attended the conference. The Secretary-General of the Organization of African Unity (OAU), later the African Union, Dr. Salim Ahmed Salim was among the participants. Furthermore, 17 representatives from major international and regional organizations were in attendance. The Beijing Declaration of the Forum on China–Africa Cooperation and the Program for China–Africa Cooperation in Economic and Social Development were consequently delivered at this conference.

The second Conference was held in Addis Ababa starting on 15 December 2003. In attendance were Chinese Premier Wen Jiabao, six African presidents, three prime ministers including Mr. Meles Zenawi of Ethiopia, President of the Commission of African Union and a special representative of the UN Secretary General participated in the plenary session. More than

70 ministers from China and 44 African countries were also in attendance. This Second Conference which Addis Ababa hosted gave Ethiopia a prominent position and spawned several mutually beneficial agreements. It initiated the passage of the Addis Ababa Action Plan (2004–2006) when it adjourned on December 13, 2003. This conference, presided over by Ethiopian Prime Minister Meles Zenawi and Chinese Premier Wen Jiabao, attracted six African presidents and subsequently set up a firm mechanism for collective dialogue and multilateral co-operation between China and Africa.

Prior to the decade when China entered the African resource market, a great deal of the infrastructure development on the continent was linked to resource extraction. Many infrastructure facilities, including ports, railways and power plants, were maintained because they were essential to the extraction of resources and for shipping them to the West. But in all cases, starting from the colonial period until the end of the cold war, the model of exploitation and trade of African resources was principally determined by the security requirements of Western powers.

What makes the Sino-African trade strategy so unique is the intensive use of what is now known as the '*Angola-mode'* trade structure: of exchanging infrastructure projects for the acquisition of natural resources. As one can surmise, for any country in Africa or elsewhere, poor provision of infrastructure is a key threat to the sustainability of growth performance because it denies them the chance to easily extract and transport their natural resources and then export them to the international market to increase incomes that can be directed to the development of manufacturing. In this way, they would not to be locked into reliance on the production of raw materials alone.

It is known that most African countries have rich deposits of natural resources, but they also have poor infrastructure that creates economic development bottlenecks that hinder their growth. In all cases, economists agree that infrastructure is essential for facilitating growth and development in a country. Some specialists estimate that Africa's annual growth rate would have been one percentage point higher had it been able to provide a higher quality level infrastructure before China's arrival. It is the combination of mineral rich Africa plagued with infrastructure bottlenecks, and manufacturing giant China endowed with the knowledge and experience of infrastructure construction but in need of oil and basic minerals that complements the healthy dynamics of Sino-African trade.

Trade deals between China and Africa are usually achieved through China's *Exim Bank*, which extends loans for infrastructure development and an arrangement for repayment is made in terms of natural resource extraction. The World Bank estimates that all China Exim Bank loans to Sub-Saharan Africa in the infrastructure sector had reached more than U.S. $12.5 billion by 2006 (El-Erian, 2016).

Large scale Chinese infrastructure financing has particularly targeted the power sector where more than U.S. $5.3 billion was cumulatively invested by 2008. For a long time, Africa has suffered from the paucity of power supply despite its high hydro potential. Since energy is critical for Africa's economic development, a lot has gone into the construction of hydroelectric power plants. By 2007, Beijing was involved in financing 10 major dams in nine African countries, with a combined generating capacity of more than 6,000 megawatts of electricity at a total cost of U.S. $5 billion. Almost all hydroelectricity was financed by China. According to the World Bank, China has also generously financed the construction and rehabilitation of Africa's either decaying or non-existent rail and road systems by committing over U.S. $4.5 billion by 2010. In Angola alone, Chinese aid has enabled more than 1,350 km of existing railway lines to be refurbished and more than 1,600 km of roads were to be constructed (El-Erian, 2016). Africa's failure to grow economically has been partly due to its continued reliance on the export of primary resources, delaying industrialization, and depriving African economies of the dynamic advantages of manufacturing.

China's involvement in the African resource market and the subsequent increase of US interest for African oil and minerals have created new development opportunities for Africa. They have also presented new challenges. Indeed, by its application of the '*Angola mode*,' a swap of mineral and agricultural reserves for infrastructure, China has introduced new dynamics in the resource market. That in turn has contributed to the emergence of fast-growing, resource-rich economies in Africa. In the case of Angola and other resource-rich countries, the infrastructure bottlenecks in the power generation and transport sectors have been eased; for this, growth dynamics of the Sino-African resources for infrastructure trade has been a decisive factor.

China's has been willing to finance Africa's infrastructure and development projects through the *Exim Bank* with fewer conditionalities than the IMF. This trade arrangement is a welcome alternative source of funding that helps the economy grow. Technology transfer has also been easier with China than with the metropolitan powers. In all cases, China has shown its readiness to share technological knowledge with its African counterparts. This is a key feature that helps them to advance technologically and improve productivity.

Chinese trade policy of exchanging infrastructure projects for mineral resources has spawned new dynamics for African development. China, with its new trade strategy, has helped African resources fuel local development projects instead of extracting and sending their revenues to Western bank accounts of corrupt leaders as was common in the past. This has spawned a West-China rivalry - a new development opportunity for resource-endowed African countries.

Africa and Choice of the Chinese Model

The challenge African leaders face now is to scale up this momentum and transfer the results into sustainable progress based on rapid job growth, poverty reduction and a diversified economy. One principal task is to employ the fruits of the most recent commodity boom to reduce Africa's dependency on primary products. The International Monetary Fund (IMF) calculates that Sub-Saharan Africa's growth rate jumped to 6.7 percent in 2007, the highest since 1974 (Habiyaremye, 2013). This was due in large part to Chinese investment and commodity demand.

Looking at past China economic growth in Africa between the years 1990 and 2013, Africa's economy grew rapidly and remarkably well. It averaged over 5 percent. In 2012, the average GDP growth of the continent was 6.6 percent, even though at that time developed nations were facing serious economic problems. For Africa, the positive development process could be attributed to the dividend of the reforms they had tailored during the period. For the resource-rich countries of Africa such as Nigeria, Angola and Equatorial Guinea, rising commodity prices were an additional boon. For the rest, foreign capital inflows particularly from China helped. It is important to note that the percentage of people living below $1.25 a day in sub-Sahara Africa declined from 51.5 percent in 1981 to 42.6 percent in 2012. As the following graph indicates, the Sub-Sahara Africa growth rate was near zero in 2009 but soared to 4.6% in 2011 and stayed relatively high thereafter.

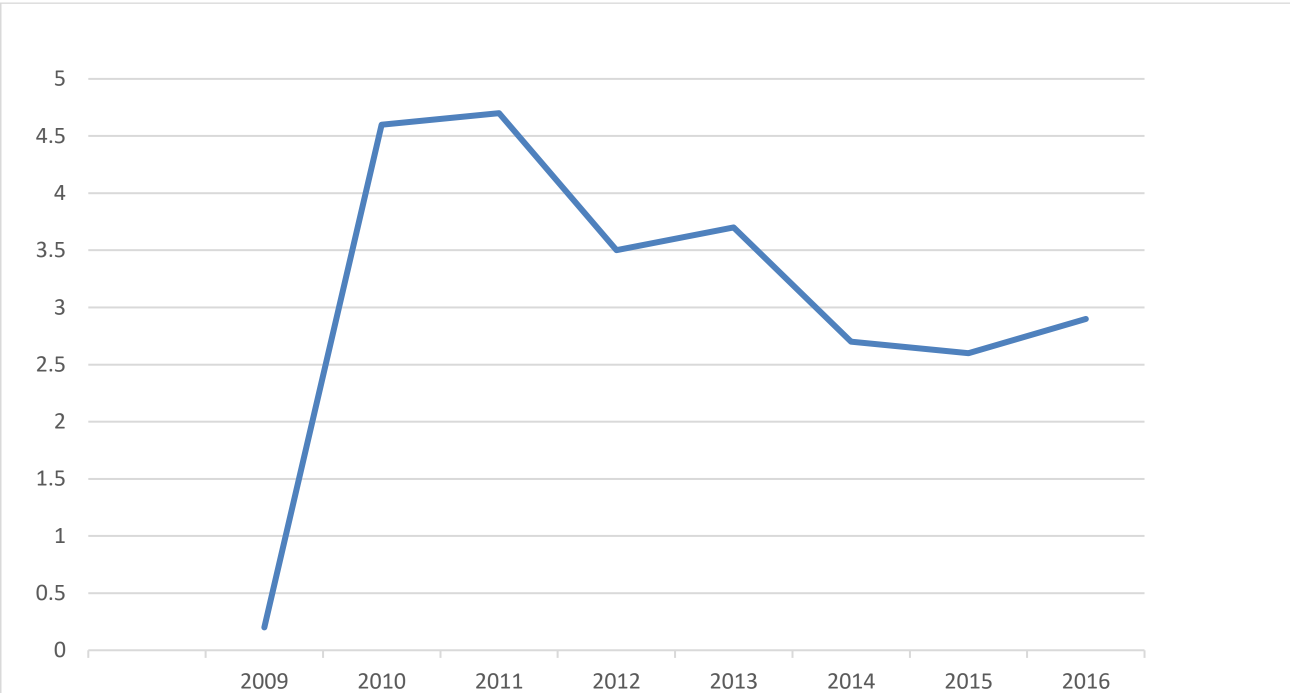

Figure 2. Sub-Sahara Africa's Middle Income Countries' Percentage GDP Growth - 2009-2016

The general African narrative paints African societies as rising from and then being pulled back into economic dependency. According to this view, neo-colonial economic relationships which are characterized by the mining of raw materials and delivering them to China in exchange for finished goods is simply a repeat of its regrettable colonial experience. The way in which China differs from the West is in regard to the extractive activity and the manner in which the Chinese consider their own development as being distinct: a third way through which to escape destitution. For the Chinese, respect for sovereignty and non-alignment are cardinal principles in bilateral or multilateral relationships. And, for the great majority of Africans, the priority is finding a way to escape dependency arising from the raw material extraction economy.

China's exceptionalism is based on Beijing's interpretation of the famed 1955 *Bandung Conference's* principles which commendably laid out a firm agenda for post-colonial states to follow in their struggle of nation building and working within the international system. China promised to abide by the Five Principles of *Peaceful Coexistence* which was itself fundamentally framed by Zhou Enlai, China's late premier. The five principles enshrined in the covenant of Bandung which China promised to follow in its relations with Africa are:

- Mutual respect for each other's territorial integrity and sovereignty;
- Mutual non-aggression;
- Mutual non-interference in each other's internal affairs;
- Equality and cooperation for mutual benefit; and Peaceful co-existence.

Furthermore, being guided by these principles, Chinese aid was slated to be provided according to the 8 set principles formulated by Premier Zhou during his State visit to Africa in 1963. Zhou stated that China is committed to:

- Promote equality and mutual benefit in providing aid to other nations;
- Never attach conditions or to ask for privileges;
- Lighten the burden of recipient countries as much as possible;
- Aim at helping recipient countries gradually achieve self-reliance and independent development;
- Strive to develop aid projects that require less investment but yield quicker results;
- Provide the best-quality equipment and materials for its own manufacturing.

Chinese aid to Africa follows a new modality of negotiation, buttressed by China's own experience as a developing country that involves a doctrine of experimentation ranging from the socialist ethos of the revolutionary period to the free market 'opening up and reform' policy introduced by Deng Xiaoping. These put a premium on achieving practical and satisfying outcomes for all parties concerned. The Chinese approach is that as it gives technical assistance, it shall see to it that the personnel of the recipient country would fully master such techniques, and that Chinese experts are not allowed to make any special demands or enjoy any special amenities.

China's approach to economic cooperation with Africa is diametrically opposed to the approach associated with colonialism that is based on the principle of restricting territorial access and trade to protect the interest of the metropolis. This was the case from the period of the Scramble for Africa which was enforced on the continent starting in 1885 to the early independence period. For the Europeans and their allies, territorial acquisition, or at least influence over them, remained the *sine qua non*e of their foreign policy. China's agenda in the 21st century is inversely proportional to this policy. It aims to forge an ever-increasing integration of economies across territorial borders of African nations.

Under China's influence, African borders are no longer serving as fortified economic enclaves catering to the financial and strategic interest of one or another metropolitan power. The boarders of Africa are now becoming increasingly open and are aimed at serving not as barriers but as bridges for regional as well as international trade flows. Furthermore, China's foreign policy approach is averse to neocolonialism because it does not comprise of the establishment of military bases and blocs in return for aid, unfair trade practices, or resort to intervention to protect its business and strategic interests, fan armed conflicts and incite 'local' wars. It also does not attempt to use international and regional organizations in the interests of a neocolonialist agenda.

China’s decision to have economic relations with what the West has dubbed rogue regimes, such as Zimbabwe, Equatorial Guinea, Guinea, South Sudan and Sudan, simply proves that they mean what they say. They have no intention of interfering in the domestic affairs of their newly befriended African companions. The former President of Senegal, Abdoulaye Wade, spoke for most Africans when he stated in January 2008:

> The battle for influence in the world between the West and China is not Africa’s problem. The African continent is in a hurry to build infrastructure, ensure affordable energy and educate our people. China’s approach to Africa’s needs is simply better adapted than the slow and sometimes patronizing post-colonial approach of European investors, donor organizations and non-governmental organizations. (Carbone, 2011)

Since the 1980s, under Deng Xiaoping, Beijing has said it pursues an independent foreign policy of peace under which China‘s major foreign policy goals are to preserve China’s independence, sovereignty and territorial integrity and to build a favorable international environment for China’s reform, opening up and modernization drive. This is in line with the logic of foreign policy that China pursues: a policy of non-interference in domestic affairs. Its rejection of attaching conditionalities to an aid package follows the same line. Even when it insists that nations that want to have economic relations with them should recognize their ’One China’ policy, the requirement is based on the same principle: China’s domestic and regional affairs should not be interfered with (Chen, 2015).

China’s and Africa’s relations are based on South-South cooperation. Normally, such cooperation is conducted between two countries or two regions at multilateral or bilateral levels. One can also have a triangular South-South cooperation which involves two developing countries aided by a third partner, usually an international organization like the UN or a benevolence-inspired developed country. Africa-China economic relations are of the first type. With regard to Africa, China has propped up the continent’s development struggle, and its support focuses on the sharing of experiences, exchanges of capacity-building, technical assistance, and mutual economic growth strategies. This approach encompasses financial, investment, trade and technology flows. In brief, it is economic and technical cooperation between China and Africa on the basis of South-South cooperation which dates back to the 1955 *Bandung Conference* of the non-aligned nations.

Without a doubt, China’s and Africa’s relationship is based on equality. Indeed, there is clearly a shared history of colonial oppression and devastation (Ringmar, 2013). China, unlike the former colonial powers that occupied Africa, has promoted political principles grounded on an unshaken perception of national sovereignty, non-interference in the internal affairs of nations, respect for territorial integrity and political relations based on egalitarian principles. It cannot be denied that both Chinese and African leaders have been aware right from the beginning that there will be some form of asymmetry in the setting of power relations as things exist now, but they also have believed that they should remain equal in terms of recognition of economic gains and political intercourse which is based on mutual respect (Bodomo, 2009). There are several forms of foreign aid that China offers to African countries. Among them are grants that are mainly used to help recipient countries build hospitals, schools and low-cost housing. The grants, in addition, support water-supply projects such as well-digging. They are also used in the area of human resource development and technical cooperation.

China-Africa relations are predicated not simply on infrastructural development for the extraction and expropriation of resources. Its technological venture in Africa extends far beyond the resource extraction sector to industrial infrastructure encompassing power generation, the expansion of seaports, road and railroad networks, and telecommunications. Leaders of both China and Africa have recognized that the lack of infrastructure has slowed down economic development efforts in virtually every African region. During the heyday of colonialism and neo-colonialism, industrial infrastructure in Africa had become insolvent: the main reason why a lion's share of Chinese investment packages, loans and assistance have been directed into industrial infrastructure so as to provide new development architecture for sustainable development in Africa.

China offers "Interest-free Loans" to African countries aimed at the construction of public utilities. Payment of such loans is usually within the provision of a five-years grace period and ten years of repayment. Then come concessional loans, which are mainly aimed at African countries that want to launch massive productive projects generating economic growth. Furthermore, concessional loans help finance medium-sized infrastructure projects. In fact, in many cases, they help establish productive industrial units, dams, and electrical grids, technical and other service projects. Concessional loans are provided by the Export-Import Bank of China. Currently, the annual interest rate of China's concessional loans is between 2% and 3% (Samy, 2010).

China undertook the reduction of or if need be, the cancellation of African payments in arrears amounting to U.S. $1.5 billion owed by the heavily indebted poor countries in Africa by 2007. In addition to doubling its aid to Africa, which rose to about 1 billion U.S. dollars by 2009, China cancelled African debt to the tune of U.S. $1.1 billion (Financial Times, 2007). China also put aside a 5 billion U.S. dollars development fund for Africa's needs. It addition, it guaranteed a cut in tariffs on selected African imports.

In the last few years, the European Union, the US as well as Western donor organizations have been livid about African nations throwing their doors open too wide to Chinese financiers and investors for unbridled exploitation. In a logic that sounds paradoxical, the West opposes Africa opening its markets to China, considering that opening free markets through globalization is a goal that the west holds dear and has continued to exalt as a pathway to progress (Ikenberry, 2005). China-Africa relations are partly a logical outcome of the marginalization of Africa in the age of Western driven globalization. China simply filled the vacuum in Africa that was created by Western disengagement in the region, and its close attention to the new Europe that was emerging from the former Eastern Bloc that used to live in the shadow of the defunct Soviet Union. African leaders embraced China following their appraisal of the after-effects of the continent's colonial experience and the realities of its post-independence neo-colonial status (Maekawa, 2015).

China-Africa relations are a model of "South-South" cooperation and development strategy that is likely to generate a win-win outcome for both parties (Adams, 2009). This is in contrast to the zero-sum game with the West, and marginalization that Africa has suffered during much of the second half of the twentieth century when it was flag independent with its umbilical cord to the West still intact. In the second half of the 20th century, Africa has been ravaged by proxy wars that raged, and are still raging, in most cases in Ethiopia, Nigeria, Angola, Congo, Chad, Mozambique, Somalia, Rwanda, Sudan and South Sudan. It is a known fact that the seeds of contradictions were laid by colonial subdivision that cut between ethnic territories fanning rivalries of nationalities and genocidal insurgence.

The West never considered in its calculations that Africa would cease to remain a backyard of Western capitalism. They entertained the hope that once the problem in Europe was solved, they would return to Africa to exploit its resources (Maekawa,2015). For them, the desperation in the region is such that poverty has become its mirror image. To make matters worse, the arrogance of the West knew no limits. In the 1980s, a London newspaper commented that African leaders were being forced to swallow their pride and accept post-colonialists' prescriptions, "apparently convinced that the white man's medicine can be adapted or Africanized to serve their countries' needs" (Timberlake, 1986). A Western official was also quoted as saying that decolonization of Africa would involve "sending smart white boys in to tell them how to run their countries" (Timberlake). Similarly, in the 1990s, an American diplomat quipped that "in the next five years, Africa will be begging to be decolonized" Michaels, 1993). Condescending and negative slants and images of Africa dominated the opinion of the Western foreign-aid establishment in the 1980’s and 90’s. For them, Africa was never to be able to develop. They ridiculed Africa, believing that practically all global problems would dissipate if Sub-Sahara Africa were totally wiped off the planet. A prominent French envoy writing under a pseudonym in *Le Monde*, commented that, "Economically speaking, if the entire black Africa, with the exception of South Africa, were to disappear in a flood, …global cataclysm will be (virtually) nonexistent" (Chesnault, 1992). Africa was never a priority of the West. For example, after the termination of the cold war, U.S. aid to Africa went down from $1.7 billion in 1985 to $1.2 billion in 1992. Washington’s interest in Africa was so low on the agenda that in 1994, the U.S. Agency for International Development closed eight of its thirty-five missions on the continent.

Following the emergence of the Eastern Bloc countries from Soviet direct or indirect control, the West’s foreign policy target moved from Africa to Eastern Europe. Western business and financial establishments soon made massive divestment from the continent of Africa triggering a huge capital flight and economic decline. Compared with 1989, foreign direct investment nose-dived by 50 percentage points to $2.2 billion in 1990. It was this troublesome phenomenon that led UNCTAD to suggest that the decline of Western foreign-direct investment in Africa had led to the marginalization of the continent.

For a long time, the West considered Africa as *“the Whiteman’s burden,”* which was a term coined by Rudyard Kipling in his praise of imperialism and referring to the colonized as “half devil and half child” (Kipling, 1899). Even though China considers Africa an untapped territory with enormous economic opportunities, some Africans have boldly stated:

> For Africans … who are physically and intellectually exhausted by two decades of economic 'reform'. . .driven by Western governments, …China represents hope that another world is possible. (Eno et al., 2014)

Thanks to China, Africa now seems to have a respite from an unfair treatment. A respite it amply deserves. The continent is currently enjoying its fastest average growth rate. The demand for commodities by China has helped support prices of its products rise on the global market. The new relationship has also depressed Africa's import prices, ultimately contributing to the recent African economic leap. China's President Hu Jintao announced at the summit for the 60th anniversary of the establishment of the United Nations (UN.) on September 15, 2005 that China strives to forge a harmonious world. His commitment to a harmonious world includes: non-isolationism by the nations of the south that he urged to promote or not to shy away from but to enter into mutually beneficial relationships with big countries, especially with the United States, Russia and the European Union.

For Hu, the key to building a harmonious world is not through isolationism but by building a harmonious relationship with big countries. Today, China is the world's largest developing country, and as such it aims to take the lead among the Nations of the Global South to pro-actively develop collaboration in the fields of economic activities and trade, and friendly exchanges with them that strive to construct harmonious partnerships (NY Times, 2005).

The essence of a harmonious world is a new concept of international order. A harmonious world refers to *ostpolitik* and peaceful coexistence. This type of world is one where all nations, big and small, live harmoniously respecting each other's right to the same treatment. It means a world governed by order, justice and fair-play. A harmonious world is expected to resolve regional and international conflicts. This is particularly crucial since an international system lacking a sovereign governing system is characterized as being in a state of anarchy.

Hu's harmonious world is not a homogeneous but a diversified world. Hu envisages a world without hegemonies where big powers are required to set the example, abide by the rules of equality of nations and shoulder their responsibilities while the small nations are expected to enjoy the status of equality and democracy, and when needed receive aid from the big powers. Hu emphasizes that China's relations with other developing countries, especially African nations, will be strengthened in order to gain mutual prosperity. To implement this, the Nations of the North are expected to shoulder a greater responsibility for universal, coordinated and balanced development globally while the nations of the global south should make fuller use of their own advantages to achieve sustainable development. Chinese Foreign Policy towards Africa was also influenced by the philosophy of Confucius, an ancient Chinese scholar of repute (551–479 BCE) who constructed the fundamentals of Chinese philosophy. Confucius emphasized a state's need for a just society as well as harmonious relationships between them.

In a historical purview, the pace of Africa's economic development picked up in the mid-1990s when China entered the scene and has grown by over 5 percent a year since. According to the IMF, Africa recorded an economic growth rate of 5.3% in 2004 and 4.5% in 2005. Its fiscal deficit was relatively low: 0.2% of GDP in 2004 which was transformed into a surplus of 0.6% in

2005. Its current account surplus rose from 0.1% of its GDP to 1.6% in the same period. Africa's exports rose 26.5%, and imports, 19.5% in 2005, while its total foreign debt sank from U.S. $293.2 billion in 2004 to U.S. $285.8 billion in 2005.

Figure 3 shows the impressive African growth since the continent started trade and technological engagement with China in 1992 and going through 2015.

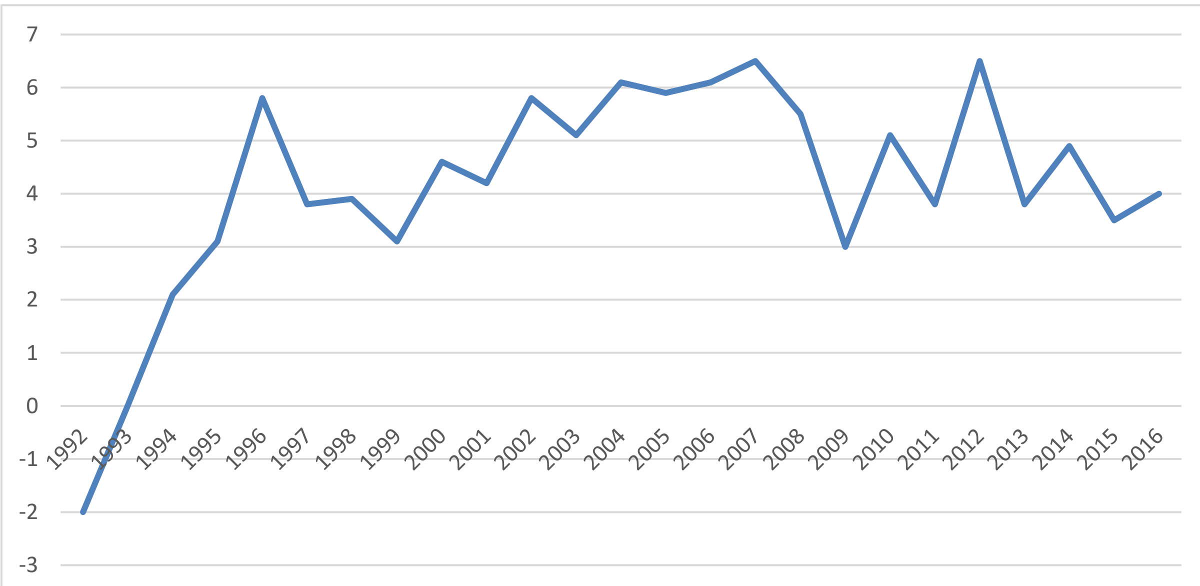

Figure 3. African GDP Percentage Growth – 1992-2016
Source: IMF Data Base – 1992-2016

It is clear that China's involvement in Africa is highly concentrated in oil and mine producing countries – comprising of a small cluster of resource-rich countries such as Angola, Congo, South Africa, Nigeria Sudan, South Sudan and Zimbabwe, but its presence continues to deepen and spread across the region to include those with paucity of commodities such as oil, minerals and timber; Ethiopia being categorized among them.

Conclusion

The author would like to stress in his concluding remarks that the scope of this paper is limited to covering economic development in Africa *vis-à-vis* its relation to China, and does not delve into other issues such as human rights which this author has dealt with in detail in other studies published in scholarly literature (Milkias, 2011). This paper has tried to show that contemporary economic relationship between Africa and China is one where there is a non-zero sum game between A and B and that A's gain or loss is not predicated on the assumption that it is followed by B's loss or gain. The relationship is one where the winnings and losses of both partners add up not to zero but rather in a win-win situation. China's heavy engagement in the contemporary African economic development course, and Africa's ready acceptance of Beijing's massive investment strategies in Sub-Sahara Africa that dwarfs those of former colonial rulers and all economically advanced democratic countries of the West is, without question, advantageous to the stakeholders. Furthermore, the paper has tried to provide pertinent information for Chinese investments in Africa in the resource rich as well as resource poor countries. That China has chosen to deal with both types of states instead of focusing on the first type proves its primary aim is not to just wheedle out extractable raw materials and then leave as the European colonizers have done.

The author has no hesitation in concluding that China's current drive to get involved in Sub-Sahara Africa's economic and infrastructure development has the potential to do more for economic growth and poverty alleviation than those claimed to have been attempted by Western countries and the half-hearted initiatives of the *Bretton Woods institutions* – the World Bank and the IMF. The paper has tried to ferret out the cost-benefit to Peking and the 54 independent African countries that gain from Chinese foreign economic investment in contrast to its urgent need for Africa's plentiful resources to feed its unprecedented industrialization process that has already identified it in PPP terms the greatest global economy outstripping the U.S., hitherto an unchallenged economic powerhouse on the planet.

One thing is clear. The West is now infuriated that the management of African resources is gradually passing to Beijing. Under the circumstances, Africa ought to determine how to leverage its relationship with China and the West in a manner that will be mutually beneficial. Nevertheless, in the field of economic relations with Beijing itself, a critique is in order. For example, it is clear that in China-Africa relations, one can easily observe that Chinese companies shy away from joint ventures with African counterparts, which would have been an asset when the continent comes nearer to or reaches its goal of becoming a middle-income region within the next few decades. Chinese companies also, at least in a few cases, tend to hire Chinese contract labor rather than recruiting local workers (Alden & Davies, 2006; Brautigam, 2003). It is clear that this would militate against technology transfer that China has promised to deliver to Africa. The practice also works against China's avowed pledge that its economic engagement will help and not prevent economic benefits to trickle down to the broader inhabitants of the continent. As a socialist country, China is without a doubt committed to help the poor to rise from the bottom rungs, but this cannot take place if Chinese contract labor is relied upon. There should also be a concerted effort to make sure that the introduction of Chinese industries, which Africans have warmly invited, do not affect the well-being of the fledgling local industries thereby displacing local producers which results in increased unemployment and underemployment. Also, despite the fact that Africa's exports and imports to China keep increasing, they are lopsided. For example, take the case of Ethiopia whose export to China has been growing by leaps and bounds as compared with its imports. But due to the fact that the amount of Ethiopian export is miniscule, the trade balance has consistently gone in favor of China. The 2015 data shows that whereas Ethiopia mainly exports to China commodities such as coffee, oil seeds and semi-processed leather goods, the finished products Ethiopia imports from China include spare parts, structural materials, steel, machinery and finished textile products which gobble up a huge amount from the country's already constricted foreign currency reserve. In the future, the African governments ought to work towards stamping out this structural discrepancy of trade relations if their economic growth is to continue to run smoothly.

Another critique concerns environmental protection. Any observer knows that Chinese investments in Africa are a must if the continent is to reach its goal of becoming a middle-income country in the not too distant future. Indeed, so far, Chinese investment and technology transfer have been crucial. They have contributed tremendously to the infrastructure development processes in Africa. They have provided the needed capital for the ventures that the continent's leaders say are a must for their countries' growth. They have transferred innovative technologies and avant-garde management techniques. But, for the good of Africa, and by extension, the good of humanity, all these activities have to be sustainably conducted within a healthy environment. All Africans should indeed be infinitely grateful for China's investment in green energy in Africa by financially and technically supporting the continent's quest to build hydro, thermal, wind and solar energy which are renewable. With Chinese aid, Africans have for the first time attracted the attention of the West, particularly in investing in renewable energy and for achieving rapid development that won them accolades from even unexpected sources such as the IMF and the World Bank. However, such economic success should not be at the expense of ignoring the well-being of the ecosystem which has remained relatively pristine for millennia. The cost of attracting Chinese investors by relaxing the enforcement of environmental standards would have dire consequences if not stopped soon. Chinese plants, whether wholly under corporate ownership or run under joint ventures, that are operating in ecologically sensitive regions should be monitored vigilantly. The governments of Africa should desist from prioritizing short-term economic growth against the long-range health of the ecosystem. Even China, that had hitherto neglected to follow strict environmental standards and had generated heavy pollutants that are choking major cities such as Beijing, has learned the hard way and is in the process of correcting their laissez faire approach in regard to their commitment to sustainable development. African environmental protection officers should not ignore, but punish, the transgressions of Chinese owned investors or those who form common ventures with Africans or Diaspora investors for their wrongdoings. The Chinese government also bears responsibility to see to it that what is not good for China cannot be good for Africa. It should put pressure to bear on companies to work sustainably, and also put pressure on even the governments themselves to pay more attention to environmental protection issues.

That being said, in general terms, by exploring secondary sources and then surveying primary archival data, the author has proven that off the cuff labeling of China-Africa economic relations as imperialistic or neo-imperialistic is misplaced. Simply because China, a Global South country, is in an advantageous position in the symmetry of power in relation to Africa does not mean that it exhibits normative behavior of imperialistic nature. The visceral accusation against China is clearly wrongheaded. Data uncovered by the author so far shows that despite the widespread anti-Chinese narratives, the relationship between Africa and China is a non-zero sum game; that instead of the benefits being lopsided, the synergy between Africa and China does produce a combined benefit greater than the sum of the parts.

References

Adams, B. (2009). Africa-China Relations: Symmetry, Soft Power and South Africa. *Special Issue, Religious Studies in China, 9*(2), 169-178.

Adejumobi, S. (2015). Does Africa catch a cold when China sneezes? *New African, 554*.

Alden, C. (2005). China in Africa. *Survival*, *47*(3).

Alden, C., & Davies, M. (2006). A profile of the operations of Chinese multinationals in Africa. *South African Journal of International Affairs, 13*(1), 83-96.

Anyanwu, J. C. (2014). Factors affecting economic growth in Africa: Are there any lessons from China? *African Development Review*, *26*(3), 468–493.

Askew, J. B. (2005). Modernization and Revolution in China: from the Opium Wars to World Power. *Pacific Affairs, 78*(1), 133-134.

Berman, B. J. (1974). Clientelism and Neocolonialism: Center-Periphery Relations and Political Development in African States. *Studies in Comparative International Development, 9*(2), 3-20.

Brautigam, D. (2003). Close encounters: Chinese business networks as industrial catalysts in Sub-Saharan Africa. *African Affairs 102*, 447-467.

Burkam, A. L. (2001). Mansa Musa: The lion of Mali. *Horn Book Magazine, 77*(6), 733.

Carbone, M. (2011). The European Union and China's rise in Africa: Competing visions, external coherence and trilateral cooperation. *Journal of Contemporary African Studies, 29*(2).

Chen, D.P. (2015). Security, domestic divisions, and the KMT's Post-2008 'One China' policy: A neoclassical realist analysis. *International Relations of the Asia-Pacific, 15*(2), 319-365.

Chesnault, V. (1990, February 28). Que faire de l'Afrique noire. *Le Monde*; Quoted in M. Chege, Remembering Africa. *Foreign Affairs, 71*(1), 146-163.

De Lorenzo, M. (2007, October 3). African Perspective on China. *American Enterprise Institute for Public Policy Research*.

Durden, T. (2012, August 8). The Beijing Conference: See how China quietly took over Africa. *Financial Times*.

El-Erian, M. (2016, January 13). The perils of China's currency devaluation. *The Guardian*.

Eno, M. A. et al. (2014). China-Africa relations: How tight are the strings attached. *International Journal of Humanities and Social Sciences*, *2*(9).

Forster, K. (1992). China's coup of October 1976. *Modern China*, 18(3), 263.

Gamora, G. & Mathews, K. (2010). Ethio-China relations: Challenges and prospects. In A. Harneit-Sievers, S. Marks, & S. Naidu, Eds., *Chinese and African Perspectives on China in Africa*. Africa: Fahamu Books & Pambazuka Press.

Girouard, E. (2008, April). China in Africa: Neo-colonialism or a new avenue for south-south cooperation. *Canadian Coalition to End Global Poverty*.

Habiyaremye, A. (2013). Angola-mode' Trade Deals and the Awakening of African Lion Economies. *African Development Review Revue/ africaine de developpement, 25*(4), 636-647.

Hasluck, N. (2005). The gang of four revisited. *Quadrant Magazine, 49*(7/8), 18-25.
Holslag, J. (2007). New presence: "The new scramble for Africa." *The Prague Journal of Central European Affairs, 9*(2), 23-25.
Ikenberry, G. J.(2005). In praise of empires: Globalization and order. *Foreign Affairs*, *84*(1), 178-178.
Kipling, R. (1929). The white man's burden: The United States and the Philippine Islands, 1899. *Rudyard Kipling's Verse: Definitive Edition*. Garden City, New York: Doubleday.
Lardy, N. R. (1987). The Chinese economy under stress, 1958—1965. In R. MacFarquhar & J. K. Fairbank, (Eds.), *Volume 14: The people's republic, Part 1: the emergence of revolutionary China*, *1949–1965*. (pp. 360-397). New York: Cambridge University Press.
Law, B. (2006, December 14). Liberia's foreign investment challenge. *British Broadcasting Corporation*.
Levanthes, L. L. (1994). *When China ruled the sea: The treasure fleet of the dragon throne,1405–1433*. New York: Simon & Schuster.
Lieberthal, K. (1987). The great leap forward and the split in the Yenan leadership. In R. MacFarquhar & J. K. Fairbank (Eds.), *Volume 14: The people's republic*, *Part 1: The emergence of revolutionary China, 1949–1965*. (pp. 291-359). New York: Cambridge University Press.
Lo, J-P. (2016). Zheng He, Chinese Explorer. *Encyclopedia Britannica*.
Maekawa, I. (2015). Neo-Colonialism reconsidered: A case study of East Africa in the 1960s and 1970s. *Journal of Imperial & Commonwealth History*, *43*(2), 317-341.
Marton, P. & Matura, T. (2011). The 'voracious dragon', the 'scramble' and the 'honey pot': Conceptions of conflict over Africa's natural resources." *Journal of Contemporary African Studies*, *29*(2), 155-167.
Mbeki warns Africa on relationship with China. (2006, December 13). *The Guardian*.
Michaels, M. (1993). Retreat from Africa. *Foreign Affairs*, *72*(1), 93-108.
Milkias, P. (2011). *Africa in focus: Ethiopia*. Santa Barbara, Cal. & Oxford: England, ABC-CLIO.
Parselelo, K. (2016, February). Beyond 'Africa Rising.'.*New African*, *558*, 6.
Prabhakar, A. C. (2003). A Critical Reflection on Globalization and Inequality: A New Approach to the Development of the South. *African & Asian Studies, 2*(3), 307-345.
Quinn, A. (2011, June 11). Clinton warns against 'new colonialism' in Africa. *Reuters*.
Ringmar, E. (2013). *Liberal Barbarism: The European destruction of the palace of the emperor of China*. New York: Palgrave Macmillan. (pp 20-41).
Rodney, W. (1973). *How Europe underdeveloped Africa*. London: Bogle-L'Ouverture Publications, London and Tanzanian Publishing House, Dar-Es-Salaam.
Samy, Y. (2010). China's aid policies in Africa: Opportunities and challenges. *The Commonwealth Journal of International Affairs 99, 406,* 75-90.

Sankore, R. (2005). Africa: The 1884 scramble was for resources to develop Europe; Rotimi Sankore examines the partition of Africa and explains why Africans must appreciate its historical significance. *New African*, *444*, 22.

Sanusi, L. (2013, March 11). Africa must get real about Chinese ties. *Financial Times*. Retrieved from http://www.ft.com/intl/cms/s/0/562692b0-898c-11e2-ad3f00144feabdc0.html#axzz2icnCpBl0

Timberlake, L. (1986). Africa in crisis: The causes, the cures of environmental bankruptcy. *Development Southern Africa, 3*(2), 340-341.

Voyages of Zheng He. (2005, July). *National Geographic*, *208*(1), 38-39.

Womack, B. (2013). Beyond Win-Win: Rethinking China's International Relationships in an Era of Economic Uncertainty. *International Affairs*, *89*(4), 911-928.

World Bank, (2016). World development indicators.

Sub-Regionalism Within the African Union: Does It Enhance Regional Integration?

Sandra Ochieng'-Springer, University of the West Indies, Cave Hill Campus, Barbados

Abstract

The African continent renewed its commitment to regional integration in the post-1990s period in keeping with the global changes at the time. As part of this revitalization, the Organisation of African Union was transformed to the African Union which has broader aims, and sub-regionalism was also embraced with the establishment of regional economic communities that act as stepping stones to greater regional integration. Both continental and sub-regional efforts have placed emphasis on economic integration with states as key players in the integration projects. The relationship between these two groupings is complex as the AU, which is meant to coordinate the activities of sub-regions, has little authority over the overlapping sub-regions. The sub-regions have seen some progress not only in economic cooperation related areas, but also in their ability to develop some areas of functional cooperation. However, these gains have not translated at the continental level. This paper argues that a regional integration agenda, largely centered on economic integration, has not ushered in the expected results and makes a case for functional integration as a distinct goal for regional integration. This is a more balanced approach that allows countries to share in non-economic benefits by belonging to a regional grouping.

Background

Over the years, especially after the 1990 period because of globalization and other related events including the collapse of the Soviet Union and the consequent entrenchment of neoliberalism, countries have sought to manage their affairs differently from the 1990s era. An impetus was placed on regionalism to help countries deal with these changes. The African continent was not left behind during this transition period. While regionalism prior to such changes focused on protectionism, under the new conditions, a new regionalism that was more outward looking was sought to enhance national operating spaces that were increasingly being chipped away by global processes. This paper will analyze regionalism on the African continent, evaluating sub-regionalism and its role within the AU and greater integration. In addition to analyzing the emergence, roles and relationships between the sub regions and the AU, the paper will make a case for greater functional cooperation within the sub regions.

In order to achieve the goal of greater continental integration, playing a more significant role in global affairs, enhancing competitiveness and meeting the challenges of a rapidly developing world, a move was made from the Organization of African Unity (OAU) to the African Union (AU) which had broader aims. Not only did this happen, but in the same period, there were deliberate efforts to enhance sub-regions and regional economic communities within the continent as well. This was in keeping with the gradualist ideas of Nyerere and others that the building of regional unions should precede the creation of the United States of Africa. These efforts were all based on economics, and to this end, both the 1980 Lagos Plan of Action for the Development of Africa and the 1991 treaty to establish the African Economic Community (AEC) or the Abuja Treaty recognized the creation and continued roles of Regional Economic Communities (RECs) as the basis for African integration. The treaty stated that the Community should be established in six stages with all involving the RECs over a duration not exceeding 34 years (1994-2027). The first stage, for example, embodied in Article 6 paragraph 2 (a) states, "Strengthening of existing regional economic communities and, within a period not exceeding five (5) years from the date of entry into force of this Treaty, establishing economic communities in regions where they do not exist" (Organisation of African Unity, 1991).

The Abuja Treaty recognized five main regions in Africa: West, East, North, South and Central Africa. There are eight Regional Economic Communities (RECs) on the African continent recognized by the AU, each was established under a separate regional treaty. They are:

- Arab Maghreb Union (UMA) comprised of Tunisia, Morocco, Algeria, Libya and Mauritania,
- Common Market for Eastern and Southern Africa (COMESA) including Burundi, Comoros, D. R. Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia and Zimbabwe,
- Community of Sahel-Saharan States (CEN-SAD) comprised of Benin, Burkina Faso, Central African Republic, Chad, Cote d'Ivoire, Djibouti, Egypt, Eritrea, The Gambia, Ghana, Guinea Bissau, Liberia, Libya, Mali, Morocco, Niger, Nigeria, Senegal, Sierra Leone, Somalia, Sudan, Togo and Tunisia,
- East African Community (EAC) including Kenya, Tanzania, Uganda, Rwanda and Burundi,
- Economic Community of Central African States (ECCAS) including Angola, Burundi, Cameroon, Congo, Democratic Republic of Congo, Gabon, Equatorial Guinea, Chad, and Sao Tome and Principe,
- Economic Community of West African States (ECOWAS) including Benin, Burkina Faso, Cape Verde, Cote d'ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo,
- Intergovernmental Authority on Development (IGAD) made up of Djibouti, Ethiopia, Eritrea, Kenya, Somalia, South Sudan, Sudan, and Uganda,
- Southern Africa Development Community (SADC) comprised of Angola, Botswana, DR Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

Paradoxically, the RECs and the regions are not effectively aligned, which means that some RECs straddle two or more regions complicating the regional configurations.

Within these main eight RECs therefore, there are overlapping sub-regions. In West Africa, the West African Economic and Monetary Union (UEMOA), comprised of Benin, Burkina Faso, Cote d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo and the Mano River Union (MRU), coexist with ECOWAS. In Central Africa, in addition to the main REC, the Economic Community of Central African States (ECCAS), there are two sub-groupings, the Central African Economic and Monetary Community (CEMAC) and the Economic Community of Great Lakes Countries (CEPGL), consisting of the Democratic Republic of Congo, Burundi and Rwanda. East and Southern Africa share four main RECs: COMESA, EAC, IGAD, SADC with two additions in the Southern African Customs Union (SACU) and the Indian Ocean Commission (IOC). North Africa is host to the two RECs of UMA and CEN-SAD. Members of CEN- SADs straddle other economic communities and sub-regions. These interrelationships depict the complex nature of regionalism and sub-regionalism on the African continent, a kind of *spaghetti bowl*, to use Jagdish Bhagwati's phrase, organization of states in their efforts to take advantage of regionalism (Bhagwati & Krueger, 1995). These overlaps have certain implications including competing commitments with varied rules resulting in a higher cost of intra-African trade, and resource and effort wastage due to duplication effectively undermining integration (Ndomo 2009). This obscures, and effectively renders, counteractive the goals of integration.

At the sub-regional level, there are a myriad of networks navigating socio-economic community agendas, however, at the supranational level, there is the African Union which is a greater regional institution concerned with the integration agenda of the entire continent. It is important to mention that given the sheer size of the continent, it has always been the aim of the AU to utilize the sub-regions or RECs as stepping stones to greater African integration. This is reflected in the AU's adoption of the 2008 Protocol on Relations between the RECs and the AU which establishes context for the coordination of the functions and activities of the AU and RECs. The AU, which is still an intergovernmental body, however, does not have much clout or ability to flex its muscles over sovereign states or sub-regions. There is no coordinated African foreign policy, for example, no articulation of a common position when dealing with external actors on an economic agenda. In trade issues, this has allowed the EU to dissect the continent or use sub-regions during recent negotiations of the economic partnership agreements (EPAs). This further complicates regional integration and unity within the continent. In this case, the sums of the parts seem to be greater than the whole where the AU is the parent yet the children have all the say.

The Role of the African Union (AU) and Regional Economic Communities (RECs)

Given the complex nature of sub-regionalism and the reality that countries adopt positions or join groups that will suit their self-interest, makes the task of the AU as an overarching institution even more difficult. This reality also calls for the AU to act as a whip exercising authority over members, a role which it currently does not play. The Constitutive Act implies this authority, but the reality is far from it. This will be discussed later in this paper. The institutions such as the Pan African Parliament, the Court of Justice, and the Commission are weak with limited effectiveness due largely to financial constraints. The specialized committees together with the executive council were set up to perform executive duties in an attempt to reconcile the objectives of continental unity and the socio-economic and political realities of the continent, and have had some successes. However, their overall effectiveness leaves a lot to be desired.

The RECs on the other hand have been able to develop areas of functional cooperation. Those areas are not directly linked to economic integration that has not been reached in the continental arena. Functional cooperation according to Girvan (2007) involves sharing services and undertaking joint activities in different areas in order to reduce costs and achieve synergies. These areas include: transportation, culture, education, telecommunications, health and related areas. This is understandable since sub-regions are easier to manage. Moreover, sub-regions have overtime had a history of cooperation that strengthened the bonds of community members in ways not achieved at the continental level given the diversity. In East Africa, examples of these include the East African Railways, telecommunications and posts, and the East African Common Services Organization. Within all the sub-regions, historically, there has been free movement of people which is not the case continentwide with different barriers in place between countries. Formal functional cooperation has generated significant gains for the different regions. Functional cooperation was also pursued at the REC levels because of a perception that the emphasis of the Abuja Treaty establishing the African Economic Community and later the AU on economic integration would unevenly benefit different countries. This is exemplified in Article 4(1) of the Abuja Treaty (Organisation of African Unity, 1991) where the objectives are set out as follows:

a. To promote economic, social and cultural development and the integration of African economies in order to increase economic self-reliance and promote an endogenous and self-sustained development;
b. To establish, on a continental scale, a framework for the development, mobilization and utilization of the human and material resources of Africa in order to achieve a self-reliant development;
c. To promote co-operation in all fields of human endeavor in order to raise the standard of living of African peoples, and maintain and enhance economic stability, foster close and peaceful relations among Member States, and contribute to the progress, development and the economic integration of the Continent; and
d. To coordinate and harmonize policies among existing and future economic communities in order to foster the gradual establishment of the Community.

The setting of such goals is good for galvanizing action to the wider cause of African development. This paper however argues that an agenda centered largely on economic integration will not be very beneficial. A more targeted approach to other areas including functional cooperation would provide a clearer level of focus and allow for easier implementation. Some elements of functional cooperation are included in the objectives (social and cultural development). In Article 4(paragraph 2e), there are 16 ways that have been delineated to reach the objectives. 90% of these speak to economic integration. One of the very few that speaks to other functional areas including culture, human resources and education can be found in subsection 4(2)e, and refers to "*The harmonisation of national policies in order to promote Community activities, particularly in the fields of agriculture, industry, transport and communications, energy, natural resources, trade, money and finance, human resources, education, culture, science and* *technology*” (Organisation of African Unity, 1991). This is the emphasis that was mentioned previously.

Functional Cooperation

This is very unlike other regional groups such as the Caribbean Community (CARICOM) established in 1973 under the Treaty of Chaguaramas which embraced functional cooperation as a separate matter and one of its objectives since its inception. The other two objectives of CARICOM are economic integration of the member states by establishing a common market regime and coordination of foreign policies. It has seen the most progress in achievement of the objective of functional cooperation and has led to sustainable development in areas related to health, education, sports, regional security, disaster preparedness and culture. Examples include the University of the West Indies, the Caribbean Examination Council (CXC) that has established a regional system of examinations, the West Indies Cricket Team, the Caribbean Festival of Arts (CARIFESTA), and the Caribbean Disaster Emergency Management Agency (CDEMA) among others (Hall, 2003; Hall & Benn, 2005).

Functional cooperation has been sought as a more balanced approach which has allowed countries to share in and contribute to the essential non-economic benefits of belonging to a regional grouping. The extent to which they have acted as stepping stones to continental unity is however debatable as these gains have not trickled up to the continental level. It is essential to form connections between RECs on such functional gains to act as a conduit between this lower level of integration and the higher continental one. Given evidence of success of functional cooperation in the Caribbean, more effort should be placed on its pursuit. Functional cooperation at the REC level also aligns with the principle of subsidiarity. Subsidiarity is an organizing principle that aims to ensure that decisions are taken as closely as possible to the citizen. It recognizes different operating spaces including international, regional, sub-regional, national and local levels. It also speaks to the upward and downward governance relationships, in this case the greater regional space dealing with the AU and the sub-regional spaces marked by the RECs. Subsidiarity is a key procedure of and is defined in Article 5 on the Treaty on European Union. It dictates that the EU does not take action (except on matters for which it alone is responsible) unless the EU action is more effective than action taken at national, regional or local levels, and therefore, regulates the exercise of powers in the European Union and its institutions (Bomberg, Peterson & Stubb, 2008).

Though not codified within the AU as it is in the EU, the principle of subsidiarity is de facto a reality in the relationship between the AU and RECs. This is evident in the areas of functional cooperation where avenues of common interest and key sectors are delegated to the RECs. A good example is in the area of health, specifically HIV/AIDS. Research has shown that the HIV/AIDs prevalence in the SADC region has been significantly reduced. Such gains took place under the implementation of certain legal instruments within the SADC Treaty which set out principles and procedures under which member states conduct their cooperation in specific areas. These instruments were the Protocol on Health, Declaration on HIV/AIDS, and Declaration on

Gender and Development. Member states sought to prioritize the fight against HIV/AIDS as the region is one of the most affected in the world. According to a report named SADC Gender Protocol 2014 Barometer, their research shows that new infections among adults have decreased by over 50% in Botswana, Malawi, Namibia, Zambia and Zimbabwe. Moreover, new infections have decreased by over 25% in Mozambique, South Africa and Swaziland (Morna et al., 2015). This shows the success of the link between subsidiarity and functional cooperation. Specific issues such as health have been left as the responsibility of the RECs and are more effective at this lower level as opposed to the wider AU level. These gains can then be harmonized between the RECs to allow for the connecting of these different nerve centers into the wider integration process.

Economic Cooperation

An analysis of the state of integration within each REC confirms the divergent levels of progress within each. In West Africa, ECOWAS, which comprises 15 West African countries and was established on the 28th of May 1975 under the Treaty of Lagos, represents a regional institutional framework for the coordination and promotion of economic cooperation in West Africa (Ndomo, 2009). ECOWAS has played a significant role in the region in the areas of peace and security, trade, and the free movement of people and goods in the region. Overtime, several institutional structures have been established to work and speed the attainment of the community's objectives. They include the conference of heads of government and state, the council of ministers, the commission, the community parliament, and the community court of justice, and the ECOWAS bank for investment and development (EBID). ECOWAS is a customs union, however, and within it is the UEMOA that consists of eight French speaking territories that have deepened their integration process and formed an economic union.

The Treaty for Establishment of the East African Community (EAC) was signed on November 30, 1999 and entered into force on 7 July 2000 following its ratification by the original three Partner States – Kenya, Uganda and Tanzania. The Republic of Rwanda and the Republic of Burundi acceded to the EAC Treaty on 18 June 2007, and became full Members of the Community with effect beginning 1 July 2007. Its objectives include developing policies and programs aimed at widening and deepening cooperation among partners in political, social, economic and cultural fields (African Union, n.d.). The main organs of East African grouping include the summit comprising all heads of state and government, the council of ministers, the east African legislative assembly, and the East African court of justice. It also has an East African development bank and the secretariat of the EAC. The EAC expanded the existing customs union and established a common market in 2010.

The Treaty establishing COMESA was signed on 5 November 1993 in Kampala, Uganda, and was ratified a year later in Lilongwe, Malawi on 8 December 1994. Its main focus is on the formation of a large economic and trading unit that is capable of overcoming some of the barriers that was faced by individual states (Tumusiime-Mutebile, 2014). It is therefore committed to promoting peace, security and stability among members. There are four organs of COMESA which have the power to make decisions on its behalf; these being the authority of heads of state and government, the council of ministers, the court of justice, and the committee of governors of central banks. The secretariat oversees daily operations of the community. The community launched a customs union in 2009.

The SADC was established by the SADC Treaty signed by heads of state and government at Windhoek, Namibia on 12 August 1992 in pursuance of the development of the Southern African region. Institutions of SADC include the summit of heads or state or government, summit troika of the organ, the tribunal, the council of ministers, the standing committee of senior officials, the secretariat, and the parliamentary forum (Morna, Dube, Makamure, & Robinson (Eds.), 2014). Its aims include, but are not limited to, promoting equitable economic growth as well as policies and programs to combat HIV/AIDS. SADC is still working towards building its FTA before moving on to the level of customs union. The EAC, COMESA and SADC are also working toward a Tripartite Free Trade Area to reduce the *spaghetti bowl* effect of overlapping membership. In general, there has been some interest and movement in sub-Saharan Africa towards a reduction in duplication and overlap. This attempt at horizontal linkages is a positive move if RECs are indeed to act as stepping stones to further integration of the continent. Such horizontal linkages create a much-needed bridge between the AU and the RECs, and should be replicated throughout the continent.

An example of the possibility of such horizontal linkages can be seen in the regional payment strategies that have been adopted by some of the RECs. In 2012, COMESA established a regional payments and settlement system (REPSS) that allowed for a more secure, easier and faster transfer of funds for member states (Settlements can now be made within a day among members.) through their Central banks (Tumusiime-Mutebile, 2014). This route has been endorsed as a cost-saving mechanism and has promoted trade within the market. The EAC in 2014 also established a similar mechanism, the East African Payment System (EAPS) with an aim to link the monetary systems of the member states to enhance integration of the region's financial sector (East African Community, 2015). The possibility is real in this instance because of the overlapping membership of the two RECs. Countries such as Kenya, Uganda, Burundi and Rwanda are members of both RECs which means that they enjoy these facilities with more countries. There are other such occurrences on the continent. SADC's Integrated Regional Electronic Settlement System (SIRESS) was operationalized between four countries of the CMA, including South Africa, Namibia, Lesotho and Swaziland, in 2013 (Wentworth, 2013). The implementation of such systems supports the aim of regional integration to facilitate trade between member states.

A successful example can be seen in the convergence of COMESA and EAC, two customs unions. A country cannot have membership in two customs unions because of the Common External Tariff (CET). There had to be harmonization of the CETs of the two RECs for the benefit of countries such as Kenya and Uganda that are members of both COMESA and EAC. To further intensify the integration process, the tripartite FTA between COMESA, EAC and SADC will harmonize their CETs allowing for an even larger market with over half of the continent countries (26) joining the partnership. There are different areas of harmonization covered by the Tripartite

program. These include infrastructure, energy, trade in services, movement of business persons, customs procedures, health and technical standards, unfair trade practices, and institutional arrangements. The examples however remain far and wide. UNECA's
Assessing Regional Integration in Africa: Rationalizing Regional Economic Communities (ARIA II) Report states that "despite strong efforts at coordination and harmonization if policies, the success has been generally limited" (UNECA, 2006, xiii).

The UMA was founded on February 17, 1989 when the Constitutive Treaty of the Union of the Arab Maghreb was signed by the five Heads of State in Marrakech. Its main aim encompassed economic growth of the region through liberalization. This involved adopting common policies to promote the free movement of people, services, goods and capital within the region. UMA has 10 main institutions: the presidency council, the consultative council, the secretariat, the monitoring committee, the meeting of the prime ministers, the council of foreign ministers, the ministerial specialized commissions, the judicial organ, the University of Maghreb, and the Maghreb Bank for Investment and Foreign Trade (BMICE) (UNECA, 2014). There has been little progress at the free trade area of integration.

CEN-SAD was established on 4 February 1998 following the Conference of Leaders and Heads of States held in Tripoli, Libya. Its objectives included economic integration through liberalization with functional integration in specific areas including cultural, educational and scientific. CEN-SAD has the following organs: the conference of heads of state, the executive council, the general secretariat, the Sahel-Sharan Investment and Trade Bank, and the Economic Social and Cultural Council (ESCC) (UNECA, 2014). There is overlapping of membership within the UMA and CEN-SAD. This union is in the free trade area stage of economic integration.

The ECCAS was established on 18 October 1983 by members of UDEAC (Customs and Economic Union of Central African States), Sao Tome and Principe, and members of the Economic Community of the Great Lakes Countries (CEPGL). The fundamental objective of the Community has been the promotion of cooperation, peace and stability and development in all areas of economic and social activity. ECCAS' institutions are the conference of heads of state and government, the council of ministers, the court of justice, the general secretariat, the advisory commission, and specialized technical committees (UNECA, 2014). ECCAS is a free trade area.

The Intergovernmental Authority on Development (IGAD) in Eastern Africa was created on 21 March 1996, in Nairobi when the Assembly of Heads of state and government signed a Letter of Instrument to Amend the IGADD Charter/Agreement. Its programs are wide-ranging in order to include economic cooperation in different functional areas, to promote liberalization and development within the region, to push the agenda of COMESA and AEC, to promote peace and security within the community, to raise the standard of living of the population, and to work towards achieving regional food security. IGAD consists of four organs: the assembly of heads of state and government, the council of ministers, the committee of ambassadors, and a secretariat (UNECA, 2014). IGAD is a free trade area. There have been discussions of a merger between IGAD and the EAC in keeping with greater economic integration as designated by the Abuja Treaty.

This progress, albeit not sweeping within the RECs, shows a conscious effort at finding common ground and addressing common interests. Progress however remains slow in most of the RECs. According to Balassa's (1961) ranking of economic integration below, five groups (IGAD, ECCAS, CEN-SAD, UMA and SADC) are still at the first level of free trade. Two, ECOWAS and COMESA, are at the customs union level. The EAC is the only one at the common market stage, and Sy (2014) states that the region has doubled its intra-regional trade in the past 5 years, and the regional GDP quadrupled within the past 10 years. However, conflicts within certain countries in the REC affect their cohesion. In the EAC's case, Burundi has been the source of lapse in cohesion. The EAC is one of the smaller REC's and has unsurprisingly gone the furthest in terms of economic integration. This can be credited to two main reasons: the smaller the region, the faster the pace of regional integration; and the sub-region also has historical antecedents of functional cooperation mentioned earlier that the current programs were able to build upon. If focus continues to be on economic integration, progress will continue to be a challenge. SADC for example has challenges transitioning from an FTA to a customs union because of difficulties involved in establishing a single Common External Tariff (CET). This is due to the 11 different individual tariff policies that require convergence into a single and uniform tariff regime (Morna et al., 2014). This complicates the negotiation process. ECCAS on the other hand has gone through prolonged periods of inactivity.

Integration

All the RECs are mainly economic integration projects. Different stages of economic integration require different levels of commitment from member states. An FTA is the easiest to negotiate, and, where most of the RECs are positioned, imposes relatively few constraints on national decision-making autonomy. A customs union costs governments autonomy in foreign economic policies as joint institutions are required to negotiate and administer common external trade policies. The common market requires even more cost to governments in terms of policy autonomy. African states have a fierce dedication to preserving national sovereignty. Unless there is a reconceptualization of the understanding of sovereignty from 'ceding or losing' to 'pooling,' it will continue to retard any attempts at deepening integration in accordance to the Abuja Treaty. According to Bela Balassa (1961), there are five escalating stages of economic integration. These are:

1. A free trade area in which tariffs and other trade barriers between participating countries are abolished, but each country retains its own tariffs against non-members.
2. A customs union that involves the equalization of tariffs in trade with non-member countries.
3. A common market where not only trade restrictions but also restrictions on factor movements are abolished.
4. An economic union that combines the suppression of restriction on commodity and factor movements with some degree of harmonization of national economic, financial and monetary policies in order to remove discrimination that was due to disparities in these

policies.

5. A total economic integration that presupposes the unification of policies listed above and requires the setting up of a supranational authority whose decisions are binding for the member states.

All the RECs contain elements of functional cooperation in addition to economic integration. Most of the RECs, except ECOWAS, were formed or re-established in the late 1980s to 1990s period in keeping with the global momentum for new regionalism. Sub-regionalism was embraced as a tool for cooperation. These mechanisms however maintain the state as the main gatekeeper for domestic interests to enter the regional arena (Moravcsik, 1998). States are still masters of the process of integration. No authority is delegated to supranational institutions and other actors are not given due importance. Therefore, even though they have embraced open regionalism, the regional integration process is still state-centered. Other actors such as civil society organizations, labor unions, other interest groups, and the private sector are not included in the ‘new’ constructions of regions. The emphasis is on market factors with the state dominating the agenda. This is reflected in the myriad state institutions, including the Heads of Government, and Council of Ministers among others, that dot all the RECs. This top down approach is reflected in the African Union (AU) as well.

The AU, which replaced the OAU after its dissolution, inherited the old structures and institutions such as the Assembly of the Union, formerly the Assembly of Heads of Government, Executive Council formerly the Conference of Ministers, the Commission formerly the Secretariat, and the Pan African Parliament (PAP). These are the four main organs. There are also advisory bodies including the Peace and Security Council (PSC), the Economic, Social and Cultural Council (ECOSSOC), and seven specialized committees as well as proposed financial institutions and an African Court of Justice.

The AU is similar to the RECs to the extent that it was established as an organization with separate functional institutions to deal with specific agendas such as peace and security, and good governance (Ndomo, 2009). The Preamble of its Constitutive Act acknowledges one such issue that requires functional attention and is assigned to the AU Peace and Security Council. It states that “the scourge of conflicts in Africa constitutes a major impediment to the socio-economic development of the continent and the need to promote peace, security and stability as a prerequisite for the implementation of our development and integration agenda” (African Union, n.d.). The RECs have specialized committees dealing with different areas. In terms of embracing open regionalism, the AU differs from the RECs. Oppong’s (2010) view of the AEC as the economic leg of the AU is correct. The AU has greater objectives championing social, cultural and political unity of Africans. To this extent, it embraces a neo-functionalist strategy which involves the creation of specialized trans-national institutions with more competencies than member states. It has attempted to introduce other actors in the process, and this is evidenced by the formation of the Economic, Social and Cultural Council (ECOSOCC), which in principle, allows for civil society to organize itself to work in partnership with the AU. However, structure is one thing, but the functional aspect is still lacking because of contextual setting and authoritarian norms. The AU is still criticized for its top-down elitist approach with states taking center stage and acting as gatekeepers in the regional integration agenda.

In terms of the main organs, the RECs replicate the organs of the AU. All RECs have supreme organs led by the heads of government and state, the council of ministers, a parliamentary forum, and a secretariat. In addition, they also have courts of justice and, unlike the AU, most have functional financial institutions. The legal standing of the RECs within the AU/AEC according to Kolbeck (2014) is however problematic. She argues that Article 88(1) of the AEC Treaty states that "[t]he Community shall be established mainly through the co-ordination, harmonization and progressive integration of the activities of regional economic communities."

Moreover, Article 3(l) of the Constitutive Act of the African Union (CAAU) lists as an objective of the AU the coordination and harmonization of policies between existing and future RECs for the gradual attainment of the Union, which includes the establishment of the AEC (UNECA, 2014). These two provisions therefore envision RECs as the "building blocks" or "implementing arms" of the AU/AEC's goal of an economically integrated African continent. She further argues that,

> "In this process, RECs are given different unofficial names that should demonstrate the concept of RECs as subordinates in the implementation process of the Abuja Treaty towards the full realization of the AEC. However, these terms do not have any legal meaning. Neither the AEC Treaty nor the CAAU contains a specific provision on the status of the RECs within the AU/AEC" (Kolbec, 2014).

Given the subordinate position in this relationship, Oppong (2010) adds that a vertical association with binding decisions from top to bottom is implied. Confusion comes because, although RECs are building blocks for the AEC, the RECs have their own legal personalities. They are not members of the AEC or party to the Abuja Treaty. This is because only individual member states within the RECs are party to the treaty. As a result, RECs are not legally bound by the policies and laws of the AEC (Oppong, 2010). This has implications for the implementation of the regional integration project, and has contributed its inconsistency and a dismal record because the AU's role to act as overseer is limited.

The Future

These sub-regional arrangements that were expected to lead to an all-African common market by the year 2025 are questionable. This target does not seem achievable given the slow pace of economic integration within the sub-regions. If most of the sub-regions are still grappling with the first stage of economic integration at this smaller, more manageable geographic space, it is highly unlikely that there will be an African common market by the set date. This has been compounded by the global economic crisis that forced countries to look inward, placing on the back burner any greater regional agenda among other issues such as insecurity.

Moreover, the AU nations have recognized the important role that RECs, and over 10 Regional Trade Arrangements (RTAs), play in the overall economic integration of the continent, and evidence suggests that actual intra-African trade is very low. A report by UNCTAD (2015) gives the figures that this is 11% of Africa's total trade over the past decade. This is in comparison to 21% for Latin America and the Caribbean, 50% for developing Asia, and 70% in Europe. Among the chief reasons for this low figure, they identify low implementation of RTAs coupled with unrealistic deadlines, weak domestic and institutional capacity as well as human resource and financial constraints.

Given the evidence so far, it is clear that setting up institutions is not a problem for the African states both at the REC and Union levels. Take off subsequent to elaborate institution formation is lacking. This is however a crucial element if these institutions are to work for the betterment of the African people. The next process should be to build the capacity of these institutions in order to strengthen their performance if they are to act as 'building blocks' to greater continental unity. According to the United Nations Economic Commission for Africa (2006),

> "capacity building may be described as entailing those actions that invest in an organization, the ability to formulate, plan, manage and implement policies and programs towards the full attainment of that organization's objectives and goals. This would require the creation within the organization, of a critical mass of skills, knowledge and expertise and the availability of the requisite financial resources and organizational instruments, processes and mechanisms, all interacting in ways that conduce to effectiveness in the formulation and prosecution of policy, and success in the implementation of plans and programs" (UNECA, 2014).

This captures the problem areas that have been overly diagnosed over time, and speaks to their comprehensive treatment. It is a process that involves engaging stakeholders as well as taking ownership of the process and making informed choices. This requires strong national, governmental support and commitment since states continue to play a crucial role in the integration process. The reality that five of the eight recognized RECs are still at the infant stage of FTA is an indictment to political will within these countries. This will work for economic integration, but if functional cooperation is to also be successful, it will need the crucial input of other actors including but not limited to CSOs, professional associations, labor unions and other interest groups to allow for that extra push in non-economic areas.

In conclusion, greater African integration remains a valued goal for Africans. The renewed impetus via transformation from the OAU to the AU and the formation of RECs have had varying results. There is still a need to push for active regional integration beyond rhetoric on the continent. This paper calls for deepened functional cooperation at the REC level and denounces the current singular vision focusing on economic integration. This will involve embracing functional cooperation as a fundamental goal of the regional integration process that will feed into economic integration, but will also result in non-trade gains, increasing efficiencies, eliminating redundancies, and enhancing the quality of life of African people.

References

African Union. (n.d.). East African Community (EAC). Retrieved from https://au.int/en/recs/eac.

Balassa, B. (1961). *The theory of economic integration*. Bloomsbury: George Allen and Unwin.

Bhagwati, J. & Krueger, A. O. (1995). *The dangerous drift to preferential trade agreements*. Washington, DC: AEI Press.

Bomberg, E., Peterson J., & Stubb, A. (2008). *The European Union: How does it work*? New York: Oxford University Press.

Bukuku, E. S. (2015). Launch of the East African Payment System (EAPS). Retrieved from http://elibrary.eac.int/launch-of-the-east-african-payment-system-eaps/

Girvan, N. (2007). *The world today: Four questions for regional integration*. Presented at Conference on Economic Growth and Transformation. Retrieved from http://www.normangirvan.info/wp-content/uploads/2007/10/four-questions-for-regional-integration-_sept-07_.pdf

Hall, K. (2003). *Re-inventing CARICOM: The road to a new integration*. Kingston: Ian Randle Publishers.

Hall, K. & Denis B. (2005). *Caribbean imperatives: Regional governance and integrated development.* Kingston: Ian Randle Publishers.

Kolbec, B. (2014). *Legal analysis on the relationship between the AU/AEC and RECs: Africa lost in a "Spaghetti Bowl" of legal relations?* (LLM Thesis). University of Cape Town. Retrieved from https://open.uct.ac.za/bitstream/item/9800/thesis_law_2014_kolbeck_b.pdf?sequence=1

Moravcsik, A. (1998). *The choice for Europe: Social purpose and state power from Rome to Maastricht*. Ithaca: Cornell University Press.

Morna, C., Dube, S., Makamure, L., & Robinson, K. (Eds.). (2014). *SADC gender protocol 2014 barometer*. Johannesburg, South Africa: Genderlinks.

Ndomo, A. (2009). *Regional economic communities in Africa: A progress review*. Nairobi: GTZ.

Oppong, R. (2010). The African Union, African economic community and Africa's regional economic communities: Untangling a complex web. *African Journal of International and Comparative Law*, *18*(1), 92–103.

Organisation of African Unity. (1991). *Abuja Treaty Establishing the African Economic Community (AEC)*. Retrieved from http://www.wipo.int/wipolex/en/other_treaties/text.jsp?file_id=173333

Sy, A. (2014). *Hearing on "Will there be an African Economic Community?"* (Testimony). *Brookings*. Retrieved from http://www.brookings.edu/research/testimony/2014/01/09-african-economic-community-sy

Tumusiime-Mutebile, E. (2014). COMESA's regional payment and settlement system (REPSS) goes live. Retrieved from https://www.bou.or.ug/bou/media/statements/COMESA_

REPSS.html

United Nations Economic Commission for Africa (UNECA). (2006). *Assessing regional integration in Africa II: Rationalizing regional economic communities*. Addis Ababa, Ethiopia: Economic Commission for Africa. Retrieved from http://www.uneca.org/sites/default/ files/PublicationFiles/aria2_eng.pdf

United Nations Economic Commission for Africa (UNECA). (2014). *United Nations ten-year capacity building for the African Union report*. Retrieved from http://www.uneca.org/ sites/default/files/PublicationFiles/2nd_triennial_review_rcm15_eng.pdf

United Nations Conference on Trade and Development. (2015). *Making regional trade work for Africa: Turning words into deeds* (Policy Brief. No 34). Retrieved from http://unctad.org/en/PublicationsLibrary/presspb2015d6_en.pdf

Wentworth, L. (2014). *SADC payment integration system*. Maastricht: European Center for Development Policy Management. Retrieved from http://ecdpm.org/wp-content/uploads/2013-PERISA-CaseStudy2-Private-Sector-SADC-Payment-Integration-System.pdf

Asymmetric Benefits: The Ethio-Eritrea Common Market (1991-1998)

Worku Aberra, Dawson College, Westmount, Quebec

Abstract

Economic theory suggests that a common market between two or more countries improves overall well-being, but it creates winners and losers in each country. Recent empirical findings also show that the overall impact of a common market on per capita income depends on the similarity of economic development between member countries. A common market among developed countries results in the convergence of per capita income while a common market among developing countries results in the divergence of per capita income. The difference in outcome, some economists suggest, is due to variations in comparative advantage between member states and the rest of the world. But the theory of comparative advantage does not fully explain the results of the *de facto* common market between Ethiopia and Eritrea (1991-1998). The empirical findings of this study demonstrate that the Ethio-Eritrea preferential trade arrangement benefited Eritrea and harmed Ethiopia. The main reason for these asymmetric consequences was acceptance by the Ethiopian government of the unfavourable terms of the preferential trade arrangement between the two countries.

Background

Economic theory suggests that a common market between two or more countries improves overall well-being, but such a market also creates winners and losers in each country because of the flow of capital, labor, goods, and services across the member countries (Venables, 2016). When capital flows from countries with a low rate of profit (capital-abundant countries) to countries with a high rate of profit (capital-poor countries), it reduces the difference in the rate of profit, and owners of capital in countries with a high rate of profit lose while owners of capital in countries with a low rate of profit gain. When labor migrates from low-wage countries (labor-abundant countries) to high-wage countries (labor-poor countries), it decreases the wage rate differential, and workers in the high-wage countries lose while workers in the low-wage countries win. The free flow of goods and services creates winners and losers as well. Owners of capital and workers engaged in export and related sectors benefit, while owners of capital and workers engaged in import-competing and related sectors generally lose, but it is unlikely that all industries suffer; companies and workers producing goods that complement imports benefit.

In a common market, because of duty-free and low-tariff imports, consumers in each country have more choices of goods and services at lower prices. Imports may also encourage domestic producers, especially those who face competition from these imports, to introduce technological change, resulting in economy-wide benefits. The increase in the production of exports enables some firms to realize economies of scale and to reduce their costs of production that can be passed on to domestic and foreign consumers as lower prices. Thus, the creation of a common market improves welfare, but it also generates distributional inequities.

To make the distributional outcomes fair, economists suggest that the winners compensate the losers or that governments establish programs to mitigate the negative effects of trade displacement (Ehrlich & Hearn, 2013). In reality, however, the losers are rarely compensated nor are effective programs established for displaced workers; the winners enjoy the benefits, and the losers suffer the losses (Ehrlich & Hearn, 2013). Empirical studies illustrate that the overall effects of a common market on per capita income, despite the sectoral income imbalances that such a market creates, hinge on the similarity of economic development between member countries. "A common market among developed countries results in the convergence of per capita income while a common market among developing countries results in the divergence of per capita income" (Venables, 2003, pp. 747–48). Venables attributes this outcome to differences in comparative advantage between member states and the rest of the world. Let us apply his hypothesis to the outcomes of the *de facto* Ethio-Eritrea common market. Assuming Eritrea has a slight comparative advantage over Ethiopia in skilled manpower but a relatively abundant unskilled labour force vis-à-vis the rest of the world; and assuming that Ethiopia has a comparative advantage in agriculture over Eritrea and the rest of the world, Eritrea will be exporting manufactured goods to Ethiopia, and Ethiopia will be exporting agricultural goods to Eritrea. The difference in relative factor abundance between the two countries, the hypothesis suggests, will result in Eritrea's per capita income increasing at a faster rate than Ethiopia's; the gains for Eritrea will be higher than those of Ethiopia. The empirical evidence presented in this paper appears consistent with this proposition, but the benefits that Eritrea enjoyed from the common market extended far beyond the gains attributable to differences in relative comparative advantage between the two countries. To fully understand the economic consequences of the Ethio-Eritrea common market (1991 - 1998) for both countries, we must examine the nature of the economic relationship that existed between them.

Even though Eritrea seceded from Ethiopia in 1991 and became formally independent in 1993, it remained economically integrated with Ethiopia until 1998 when war broke out and formal economic ties ended. Prewar economic integration between the two countries included a free-trade area, a partial customs union, and currency and monetary unions (IMF, 1995; Tesfai, n.d.; Trivelli, 1998; Woldemariam, 2015). Following independence in 1993, the Eritrean government advocated an economic union with Ethiopia and wanted to harmonize fiscal, monetary, taxation, and other policies (Asrat, 2014; ESAT, 2015; Yohannes, 1993), but the attempt failed largely because the terms and implementation of the extant preferential arrangement favored Eritrea. Although the preferential trade arrangement between Eritrea and Ethiopia was extensive, it lacked a comprehensive formal agreement. To be sure, various attempts were made to formalize the arrangement, beginning from the time Eritrea became independent. In July 1993, Presidents Meles Zenawi of Ethiopia and Isaias Afeworki of Eritrea signed the Friendship and Cooperation Agreement, a broad outline for collaboration (IMF, 1995; Tesfai, n.d.; Woldemariam, 2015). In September 1993, the Asmara Pact, an agreement to harmonize economic policies, was signed in

Asmara (Tesfai, n.d.; Woldemariam, 2015). Throughout the 1990s, various ministerial and interparty committees signed additional agreements, almost all initiated by the Eritrean government (Asrat, 2014). The agreements covered a wide range of areas for economic, security, and political cooperation between the two countries, but none were fully implemented because of divergent views, mutual suspicion, and conflicting interests (Asrat, 2014; Iyob, 2000).

The two governments agreed in April 1995 to formally create a free trade area (IMF, 1996), yet a comprehensive accord was never signed. Although the Eritrean Peoples' Liberation Front (EPLF), now The People's Front for Democracy and Justice, and the Tigrayan People's Liberation Front (TPLF) signed a few agreements on behalf of their respective governments (the EPLF for Eritrea and the TPLF for Ethiopia), but none was ratified by the Ethiopian parliament. This, despite the fact that Article 54 of the Ethiopian constitution requires all international treaties signed by the government be ratified by parliament. Article 54, Section 12 reads, "It [parliament] shall ratify international agreements negotiated and signed by the Executive" (Constitution of the Federal Democratic Republic of Ethiopia, 1995). Had the agreements been introduced to parliament, the ensuing public discussion would have confirmed the widely-held perception that the Ethiopian government is ambivalent to Ethiopia's national interests. It is even possible that some members of the parliament controlled by the TPLF would have opposed the treaties. The TPLF, concerned about the negative public reaction to the terms of the agreements, decided not to bring any of the agreements to parliament for ratification. The lack of parliamentary ratification raises questions about the legality of the preferential arrangement between the two countries. The common market, although it lacked a legally binding comprehensive accord, lasted from 1991 to 1998. The lack of a formal treaty, more specifically, the absence of a dispute settlement mechanism, along with the EPLF's persistent violation of the agreements and engagement in contraband activities in Ethiopia, as pointed out by some researchers (Asrat, 2014; Kendie, 2005; Trevilli, 1998), was a constant source of friction between the two governments throughout this period. The unique economic relationship that Eritrea and Ethiopia formed after Eritrea became independent and the subsequent cessation of economic ties in 1998 has created a state of natural experiment in which researchers can analyse the "before" situation, the economic conditions under the common market, and the "after" situation, the economic conditions in the wake of the dissolution of the common market, in both Ethiopia and Eritrea. Despite this unique opportunity, there has been no empirical investigation of the consequences of the common market for both countries.

The extensive literature on the war between the two countries often mentions economic factors that contributed to or gave rise to the war, but none of the authors discuss the details or outcomes of the common market. Some researchers, without discussing the specifics of the economic relationship, have concluded that the arrangement benefited Eritrea disproportionately. Gilkes notes, "[I]t was Eritrea and Eritreans who had largely benefited at the expense of Ethiopia" (cited in Khadiagata, 1999, p. 5). Trevilli (1998) points out, "The various agreements between the TGE and the Government of Eritrea (GOE) were very advantageous for the Eritrean side" (p. 277). Abbink (1998) states that until 1997 the Ethiopian government followed a "[R]ather Eritrea-friendly economic policy" (p. 9). Asrat (2014) wrote an entire book that claims how the Meles

Zenawi government betrayed the national interests of Ethiopia and advanced those of Eritrea. Among the public, unsurprisingly, there is no consensus between Ethiopians and Eritreans on the distribution of the economic benefits of the common market. The debate on the distribution of the gains from the Ethio-Eritrean common market is not unique; it is a universal feature of the discussion on the distributional consequences of a common market, as the benefits of a common market can never be equally distributed between the participating countries (Burfisher, Robinson & Thierfelder. 2001). In general, although theoretically and empirically one country often benefits *more* than the other, *both* will gain, however small those gains may be for the relative "loser." Nonetheless, contrary to what economic theory suggests, the Ethio-Eritrea common market generated a skewed distribution of costs and benefits with the benefits going to Eritrea, and the costs falling on Ethiopia. The reason for this imbalance is that the Ethiopian government allowed the Eritrean government to transfer Ethiopia's resources to Eritrea without any reciprocal flow of goods, services, assets or obligations to Ethiopia. Given the welfare costs that Ethiopia suffered from the common market, why did the Ethiopian government agree to such an arrangement in the first place? To answer this question, I will briefly outline one plausible hypothesis.

Theoretical Discussion

Even though it is difficult to satisfactorily explain the preferential trade arrangement between Ethiopia and Eritrea within the existing theoretical framework of international trade agreements, a political economy approach based on rational choice theory ((Baldwin, 1989; Gilpin, 2001; Maggi & Rodríguez-Clare, 2007; Mansfield & Milner, 2012; Milner, 1999) which states that decision makers weigh the expected costs and benefits of each of the alternative options available to them and choose the one whose benefits outweigh the costs (Eggertsson, 1998;). To understand the pro-EPLF policy of the TPLF-controlled transitional government, we need to consider the two options that the TPLF leadership faced in its attempt to stay in power after it formed the government in 1991: allying with the EPLF or allying with the Ethiopian People's Democratic Revolutionary Front (EPRDF.) In 1991 when the TPLF assumed power in Ethiopia, it lacked a powerful domestic base within the coalition parties of the EPRDF or among the Ethiopian people. It had to turn to the EPLF for support. As Trivelli (1998) noted, "[U]ntil military victory had been translated into political hegemony, the EPRDF would need the alliance with the EPLF to be able to fully concentrate on securing its position within Ethiopia" (p. 276). Iyob (2000) writes about "[T]he TPLF-EPLF intelligence and security cooperation, which had ensured the supremacy of the TPLF in the EPRDF coalition…" (p. 677). Woldemariam (2015) acknowledges the crucial role the EPLF played in training and arming the TPLF army before and after the latter came to power. Sargo (2006) states that the EPLF even attempted to weaken the TPLF so as to make it more dependent on the EPLF, for example by blowing up arms depots in Addis Ababa and Dire Dawa when the joint TPLF-EPLF forces entered Addis Ababa in May 1991 and by ingratiating itself with the opposition throughout the early 1990s. The EPLF did this while simultaneously supporting the TPLF not just militarily but politically by using Eritreans living in

Ethiopia to mobilize the Oromos and the people in Southern Ethiopia to support the new government.

The EPLF, the TPLF's strategic ally during the struggle against the Derg, thus provided the support the latter needed in the early days of its assumption of power, but that support came at a price: the transfer of Ethiopia's resources. This support, mediated by their past friendly relationship (although at times conflictual) and shared anti-Ethiopian views, was based on mutual benefits. The TPLF required the EPLF's military and political support, and the EPLF needed resources to embark on its ambitious plan of turning Eritrea into the Horn of Africa's "Singapore" within two decades (Asrat, 2014; Giorgis, 2010). The reciprocal coincidence of needs resulted in the common market arrangement that benefitted the EPLF tremendously but hurt Ethiopia drastically.

So, rational choice theory surmises that as a result of the uncertainty the TPLF leadership faced during the early days of its rule, it opted to ally with the EPLF; ready to reward the EPLF with economic benefits in return for political and military assistance. But once the regime felt securely established in power in the late 1990s, a faction within the TPLF realized that it could appropriate, using the TPLF-owned companies, the benefits accruing to the EPLF, and persuaded the party to renegotiate the trade arrangement with Eritrea in 1997. To illustrate the fight between the two fronts over who should appropriate Ethiopia's resources, let's take one of Asrat's (2014) accounts. He relates a story of how the regional government of Tigray in 1992 caught thirty-eight trailer trucks loaded with sesame seeds, worth birr 38 million, attempting to cross the border to Eritrea. He alleges that this is a smuggling operation organized by the EPLF. He reports that the seeds were duly confiscated without telling us who confiscated them, but it is clear that it was the regional government of Tigray run by the TPLF under his rule. He also mentions other incidents in which the regional government of Tigray confiscated goods that were about to be smuggled into Eritrea from Ethiopia and goods smuggled into Ethiopia by the EPLF. Further, he argues that the regional government was concerned about the negative impact of imports from Eritrea on the nascent manufacturing sector in northern Ethiopia, primarily in Tigray. These narratives exemplify the motivation behind the decision to renegotiate the agreement: to redirect the appropriation of Ethiopia's resources from the EPLF to the TPLF. In essence, the renegotiation reflected the resolve by a faction within the TPF to restrict the EPLF's access to Ethiopia's economy and redirect the flow of rents to TPLF officials and to the TPLF-owned companies. There were a few factors that triggered the dissolution of the common market. Even though the common market lasted until 1998, it lacked effective dispute settlement mechanisms to deal with the issues, conflicts, and problems that the extant agreements failed to address satisfactorily for both parties. These included Eritrea's use of multiple exchange rates for the birr, the status of Eritreans living in Ethiopia, the distribution of petroleum products from the Assab Refinery, the EPLF's demand for parity between the birr and its newly issued currency, the Nakfa, in 1997, and its request for the free circulation of the Nakfa in Ethiopia, plus other concerns (Asrat, 2014; Trevilli, 1999).

Data Limitations

When undertaking the research, unsurprisingly, some data problems were encountered. As is generally the case, economic data supplied by government agencies in developing countries, especially those in Africa, are notoriously unreliable because of the lack of funds, lack of trained manpower, and inadequate statistical infrastructure, in addition to political considerations (Jerven, 2013). To obtain data, I used the various issues of the IMF's *Staff Country Reports* (1995 to 2003) on Eritrea for data on trade, monetary statistics, tax and nontax revenues, and the distribution of petroleum products between Eritrea and Ethiopia refined at the Assab Refinery. The IMF in turn obtained these data from various Eritrean government agencies, namely the Bank of Eritrea, the Customs Office, and the Eritrean Petroleum Corporation. Along with the systemic problem of data unreliability, it is highly likely that the Eritrean government took political considerations into account when providing some of the data to the IMF.

It is highly probable, for example, that the EPLF may have under-reported cash transfers from the National Bank of Ethiopia (NBE) to Eritrea, a cash gift from the Ethiopian government to the EPLF, while it may have overstated the monetary liabilities of Ethiopia to Eritrea. Asrat (2014), for instance, recounts that Meles Zenawi, without the approval of the Council of Ministers, ordered the NBE to transfer birr 1.2 billion to Eritrea in 1992. The transfer was later acknowledged, but the reported amount of the cash transfer from Ethiopia to Eritrea in 1992 was less than birr 1 billion (IMF, 1995).

Second, the data on Eritrea's imports from Ethiopia and Eritrea's exports to other countries, subject to the overall problems of data inaccuracies, have also been affected by political considerations. In the 1990s, there were persistent accounts in the Ethiopian media about how Eritrea became a leading exporter of coffee by re-exporting the coffee it imported from Ethiopia (*Ethiomedia*, December 2004). The media reports have been corroborated by Asrat (2014) who confirms that the EPLF bought Ethiopia's export commodities in large quantities, with the full knowledge of the Ethiopian government, then transported them across the border using donkeys, camels, and trucks, and sold them on the international market. Kendie (2005) also reports that throughout the years of the common market, the EPLF imported large quantities of agricultural products from Ethiopia and exported them. However, in all of its officially reported trade statistics, the Eritrean government has not indicated any coffee imports from Ethiopia or coffee exports to the rest of the world. Obviously, there are political reasons behind the Eritrean regime's lack of transparency on its coffee trade, including its fear of being accused of violating the 1993 Friendship and Cooperation Agreement that prohibited the re-export of Ethiopia's export commodities. The agreement forbade Eritrea from purchasing in birr any of Ethiopian export products and goods that were in short supply in Ethiopia (IMF, 1995). As specified in the agreement, Eritrea must pay for these goods in foreign currency, but the EPLF violated the agreement by purchasing these products with birr in Ethiopia and exporting them (Asrat, 2014). Despite the Eritrean government's non-reporting of its international trade of coffee, a comparison of the aggregate data on Eritrea's exports, during and after the dissolution of the common market, reveal a substantial decrease in Eritrea's total exports after Eritrea ended its economic ties with Ethiopia (World Bank, 2000). My calculations indicate that Eritrea's exports, expressed as a percentage of GDP, decreased from 31 per cent in 1994 to 10 per cent in 2000, after Eritrea stopped exporting to and importing from Ethiopia. As will be shown later, Ethiopia was Eritrea's most important trading partner; and with the cessation of imports from Ethiopia, Eritrea could no longer re-export the agricultural products—oil seeds, pulses, leather, hides and skins, live animals, and coffee—that it imported from Ethiopia. These data limitations notwithstanding, this paper will reveal how the *de facto* common market benefitted Eritrea but harmed Ethiopia. The reason for the skewed distribution of the costs and benefits of the common market is that with the acquiescence, cooperation, and facilitation of the Ethiopian government, the preferential arrangement created transmission mechanisms, official and unofficial, legal and illegal, that permitted the EPLF to transfer Ethiopia's resources to Eritrea.

The official and legal transfer mechanisms included the following: cash deliveries from Ethiopia to Eritrea, Eritrea's export of manufactured goods to Ethiopia duty free, Eritrea's import of agricultural goods and food from Ethiopia duty free, purchased at domestic prices with Ethiopia's domestic currency. In addition, there were service fees paid by Ethiopia for its use of the "free" ports of Massawa and Assab, the subsidy Ethiopia provided to Eritrea when purchasing the petroleum products refined at the Assab Refinery, and the fees Ethiopia paid for using the refinery. As stated by Asrat (2014) and others, the EPLF's unofficial and illegal means of resource transfer included contraband trade, appropriation of Ethiopia's foreign exchange reserves by using multiple exchange rates for the birr, re-exportation of Ethiopia's export commodities, and the unrecorded remittances of Eritreans living in Ethiopia (IMF, 1995). Asrat (2014) reports that the EPLF was engaged in a two-way smuggling operation. It smuggled Ethiopia's export commodities out of Ethiopia. It also smuggled goods into Ethiopia, mostly electronic products but other goods as well, such as guns and whiskey, into Ethiopia using the provision of the 1993 agreement that allowed the transit of goods from Eritrea destined for other countries in East Africa (and vice versa) to pass through Ethiopia duty free and uninspected. Similarly, as reported by Kendie (2005), the EPLF imported different types of goods through Mombasa claiming that they were goods in transit, and sold them illegally in Ethiopia. To undertake its unlawful activities in Ethiopia, to purchase goods in Ethiopia that it smuggled to Eritrea or to distribute the smuggled goods in Ethiopia, the EPLF used, Asrat (2014) contends, Eritrean diplomats and its agents working at its embassy in Addis Ababa and its consulates in Mekele, Asayta, and other cities, as well as Eritrean and Ethiopian businessmen, including Meles Zenawi's' father (Asrat, 2014), along with its state-owned companies. Eritrea also benefitted in other ways from the EPLF's cordial relationship with TPLF in which the latter allowed the former to acquire all of Ethiopia's physical assets located in Eritrea without receiving any monetary compensation. What is more, the Ethiopian government cancelled Eritrea's share of Ethiopia's external and internal debt at the time of Eritrea's independence. The following sections will examine closely each of the mechanisms the EPLF used to transfer resources from Ethiopia to Eritrea with the explicit and implicit approval of the TPLF.

The EPLF's Expropriation of Ethiopia's Financial Assets

When Eritrea became *de facto* independent in 1991, the EPLF expropriated all of the physical and financial assets belonging to the eleven branches of the Commercial Bank of Ethiopia (CBE), one branch of the Agricultural and Industrial Development Bank (AIDB), and the Asmara branch of the NBE (IMF, 1995). Neither the EPLF nor the Ethiopian government has provided any data on the total value of bank assets in Eritrea that were expropriated by the EPLF, but there are IMF data that partially indicate the amount of cash seized by the EPLF, with the caveat that the source of the IMF data was the EPLF itself, as indicated previously.

Along with the cash that it expropriated from the banks when it entered Asmara, the EPLF also received a number of cash deliveries from the transitional government in Ethiopia, mostly in 1992 and 1993, without providing any assets, goods, or services or assuming any obligations in return. The financial data provided by the IMF (1995), showed that, between 1991 and 1993 alone, the EPLF acquired almost birr 1.3 billion through its cash acquisitions and cash deliveries from the Ethiopian government. The actual amount of cash transfers from Ethiopia to Eritrea during this period was most probably higher than what was reported. It is most likely that the Eritrean monetary authorities under-reported the cash transfers from Ethiopia. As stated above, Asrat reports (2014) that in 1992 Meles Zenawi authorized the NBE to transfer birr 1.2 billion to Eritrea, but not all of this transfer was reported. Between 1991 and 1992, the reported total amount of cash held by the banks in Eritrea increased by only birr 673.6 million (IMF, 1995). Further, there have been persistent rumours in the Ethiopian media that the EPLF took cash and other assets from Ethiopia with the approval of the prime minister. For example, as reported by *Ethiomedia*, the EPLF flew birr 70 billion in 1994 (equivalent to US $32 million) in a Cessna airplane from Addis Ababa to Asmara (*Ethiomedia.* April 10, 2014). One of the EPLF's reasons for requesting cash deliveries from Ethiopia was that it needed the cash to cover the deposits of the CBE's former customers, but it is difficult to conclude if the demand is justifiable since there are no public data that suggest the CBE owed money to the Eritrean government; if anything, it is highly plausible that the Eritrean regime owed money to the CBE. As previously mentioned, the EPLF took all of the CBE's physical and financial assets, including the cash held in the bank's vault, and renamed it the Commercial Bank of Eritrea (CBER). Normally, when a government acquires a bank, it assumes all of the bank's assets and liabilities. Yet, when the Eritrean government seized all of CBE's assets in Eritrea and transferred them to the CBER, it demanded further cash deliveries from Ethiopia to cover the deposits of the previous customers of the CBE in Eritrea, to which the transitional government obliged. The IMF (1995) reports, "Between August 1991 and end-1992, the CBER [the Commercial Bank of Eritrea] received cash transfers amounting to birr 375 million to partially cover its deposit liabilities" (p. 25). In the absence of public data on CBE's deposits at the time that it was acquired by the EPLF, it is impossible to deduce if the transfer was justified or not. In fact, it was most unusual for the CBE to transfer any cash to cover, partially or wholly, the deposits of its former customers, when it did not receive full payment for its physical assets, cash in vault, or outstanding loans that the EPLF expropriated. As stated by the IMF (1995), in 1995 there was still birr 53 million under negotiations and concludes that "[T]here are unresolved issues regarding the loans supplied by the Commercial Bank of Ethiopia to enterprises in Eritrea, prior to May 1991, which are unlikely to be recovered" (p. 25). In the early 1990s, there was also a continual flow of cash to Eritrea from Ethiopia, shown as positive entries in the "errors and omissions" component of Eritrea's balance of payments with Ethiopia; a cash transfer not officially accounted for. The IMF report (1995) says, "The errors and omissions component of the balance of payments with Ethiopia is affected by various factors, including, most notably unrecorded across-the border trade transactions as well as movement of private capital flows" (p. 31). The IMF report shows some of the cash that was recorded as "private capital flows" was actually cash deliveries from the NBE to Eritrea purportedly to cover the previous deposits of the CBE in Eritrea. For example, in 1992, this transfer amounted to US $58.9 million (IMF, 1995).

The legal, semi-legal, and illegal transfer of cash from Ethiopia, the IMF documents indicate, continued throughout the period of Eritrea's economic integration with Ethiopia, albeit at a lower rate in the later years, resulting in a large accumulation of cash in Eritrea. Some of the accumulated birr in Eritrea flowed back to Ethiopia, as indicated by the negative entries in Eritrea's balance of payments with Ethiopia, again under the category "errors and omissions," to buy more of Ethiopia's resources and assets. The reason for the flow of cash from Eritrea back to Ethiopia was the higher rates of interest and profit (IMF, 1996) in Ethiopia than in Eritrea. The amount of the cash transfers, even if we take only the officially reported cash transfers, were not inconsequential. In 1992, the amount of cash transferred from Ethiopia to Eritrea was so large that it alarmed the IMF; it reported in 1995 that there was, "Excessive liquidity in Eritrea's banking system accumulated largely during 1992…" (IMF, 1995, p. 24).

The impact of these cash transfers on the economies of Eritrea and Ethiopia was much larger than the transfers themselves because of the combined effects of the money multiplier and velocity of money. The money multiplier indicates by how much the amount of money in circulation increases when reserves increase, depending on the required reserves, cash drain, and the level of monetization in an economy. The cash transfers from Ethiopia to Eritrea constitute an increase in the monetary base of Eritrea's money supply. An increase in cash held by the banks, the monetary base, will result in a much larger amount of money in circulation, subject to the required reserve ratio and the variables mentioned above. In the 1990s, the IMF states that "[T]here are no statutory reserve requirements in place…" in Eritrea (IMF, 1995, p. 22). This means, with low or virtually no reserve requirements in the Eritrean banking system in the early 1990s, the cash transfers from Ethiopia resulted in a large increase in the amount of money in circulation in Eritrea. With the cash transfer that totalled close to birr 1.3 billion between 1991 and 1993 alone, if we assume a reserve ratio of 5 per cent, the increase in the money supply during this period would be close to birr 26 billion. This substantial expansion of Eritrea's money supply caused the IMF to issue a warning in 1995 that the increases could have harmful economic consequences for Ethiopia, specifying that "[E]xcess liquidity could prove inimical to financial stability in the birr area [Ethiopia]" (IMF, 1995, p. 24). Additionally, the velocity of money, defined as the number of times a unit of money changes hands, enabled the EPLF to acquire a higher amount of Ethiopia's resources than is reflected in the total of the transfers themselves. In economies such as those of

Ethiopia and Eritrea, with low levels of monetization, the velocity of circulation is low. As stated by the IMF (1998), the velocity of money in Eritrea in 1992 was 1.6, and if we assume a reserve ratio of 5 per cent, the cash transfer of birr 1.3 billion to Eritrea would have generated economic transactions of about birr 41.6 billion between 1991 and 1993 alone. This combined effect of the increase in the money supply and velocity of money in Eritrea allowed the EPLF to "buy" Ethiopia's goods, services, and assets worth much more than the initial cash transfers throughout the period of the common market, but the "purchase," at least a good proportion of it, involved no corresponding transfer of goods from Eritrea to Ethiopia. There were consistent rumors that the EPLF used counterfeit birr to acquire Ethiopia's resources. Validating these rumors, Kendie (2005, p. 357) writes, "Unscrupulous Eritrean merchants used forged Ethiopian birr and bought a variety of cereals from farmers in Gondar and Gojjam thus creating untold misery to the farmers." While the increase in the amount of birr in circulation, real or counterfeit, in Eritrea facilitated the EPLF's resource acquisition in Ethiopia, it also generated inflationary pressure both in Eritrea and Ethiopia.

The other financial transfer mechanism the EPLF used for acquiring Ethiopia's resources was its use of multiple exchange rates for the birr — the official exchange rate, the auction rate, and the "preferential exchange rate"— depending on the transaction, while Ethiopia retained only one exchange rate, the official exchange rate until 1995 and the auction rate in the subsequent years, as noted by the IMF (1996). What the IMF calls the "preferential exchange rate" is actually the illegal exchange rate that the EPLF established without the consent of the NBE, the only monetary institution authorized to determine the exchange rate for the birr. The IMF observes that the EPLF used the "preferential rate" for "equilibrating" (IMF, 1995) its dollar holdings. What this IMF statement means is that the EPLF used the illegal rate for accumulating US dollars. For buying US dollars and selling the birr, the EPLF utilized the "preferential rate" and used its embassy in Addis Ababa, supporters, and party members (Asrat, 2014) and its companies, especially the Red Sea Trading Company and the Finance Commission (IMF, 1995), to carry out the transactions. Implementing a triple exchange rate regime, while Ethiopia was using only the official exchange rate, permitted the EPLF to siphon off Ethiopia's foreign exchange, resulting in Eritrea's "[C]omfortable foreign exchange reserve position" (IMF, 1995, p. 34) in the early 1990s. To demonstrate the extent to which the EPLF profited from establishing the illegal "preferential rate" for the birr, I calculated the difference between the auction rate and the preferential rate, expressed as a percentage of the auction rate for the period 1992 to 1997. The calculations show that the difference in the two rates was significantly high in the early years of the common market, particularly in 1992, but gradually declined and disappeared altogether after Eritrea introduced its own currency, the Nakfa, in 1997. Using multiple exchange rates allowed the EPLF to profit in the foreign exchange market, to accumulate foreign exchange, to ration foreign exchange, and to divert foreign exchange from Ethiopia. While the Eritrean government was pursuing a policy of multiple exchange rates for the birr, it was simultaneously advancing the "harmonization" of economic policy between the two countries (Asrat, 2014; ESAT, 2015; Tesfai, n.d.).

Service Charges at the “Free” Ports of Massawa and Assab

Isaias Afeworki and EPLF supporters repeatedly assert how Ethiopia used Massawa and Assab as “duty free” ports for its exports and imports between 1991 and 1998, but this assertion overlooks the substantial port fees Ethiopia paid and the sizeable petroleum subsidy it provided to the Eritrean government, worth millions of US dollars. The service charges Ethiopia paid contributed to a large proportion of the EPLF’s nontax revenue between 1991 and 1998. An examination of the difference in port service fees during the common market and post-common market periods demonstrate that Ethiopia was an important source of port service revenue for the Eritrean government. In 1993, when the two fronts were close allies and Ethiopia was heavily dependent on Eritrea’s ports for its international trade, the port service fees accounted for close to 10 per cent of Eritrea’s GDP, but after Ethiopia stopped using the ports in 1998, their share declined precipitously to 1.8 per cent in 1999 and to 1 per cent in 2000 (IMF, 1998, 2003). The data show that between 1993 and 1997 Ethiopia paid close to birr 1 billion in port fees.

The Assab Refinery

The Assab Refinery was built with a loan of birr 41.5 million from the USSR to the Ethiopian government to be paid in twelve years and with a further contribution of birr 2 million by the Haile Selassie government for consultation services (Aakalewld, 1966). The construction of the refinery started in 1964 and was completed in 1967. At the time, it was considered Ethiopia’s most important infrastructure project. When Eritrea seceded from Ethiopia in 1991, the transitional government of Ethiopia transferred the ownership of the refinery to the EPLF, without any recompense; however, the Friendship and Cooperation Agreement allowed Ethiopia to continue using the refinery and Assab as a “free” port, but required that it allocate 30 per cent of its refined petroleum products to Eritrea (IMF, 1995; Trevilli, 1998). Under the agreement, the Ethiopian Petroleum Corporation (now the Ethiopian Petroleum Enterprise) would pay for crude oil in US dollars and ship it to the refinery. The refinery would refine the oil and deliver the refined products to the Ethiopian Petroleum Corporation, and the corporation would then sell predetermined quantities in birr to the Eritrean government. Through this complex, arcane, and unfair arrangement, the IMF (1995) reports that Eritrea fulfilled all of its needs for refined petroleum products without spending foreign currency, at highly subsidized prices, and almost for free since the EPLF paid for the products with some of the money that was transferred from Ethiopia. Although the 1993 agreement specifies that Eritrea’s share of the refined petroleum products would be 30 per cent, the actual proportion of the products that Eritrea received increased steadily during the common market years from about 17 per cent in 1992 to more than 54 per cent in 1997 as illustrated by Figure 1.

Given the differences in the sizes and the rates of growth of the economies of the two countries, there is no justification for the steep increase in Eritrea’s share. Nor is there any convincing argument for the allocation of 30 percent of the products to Eritrea in the first place.

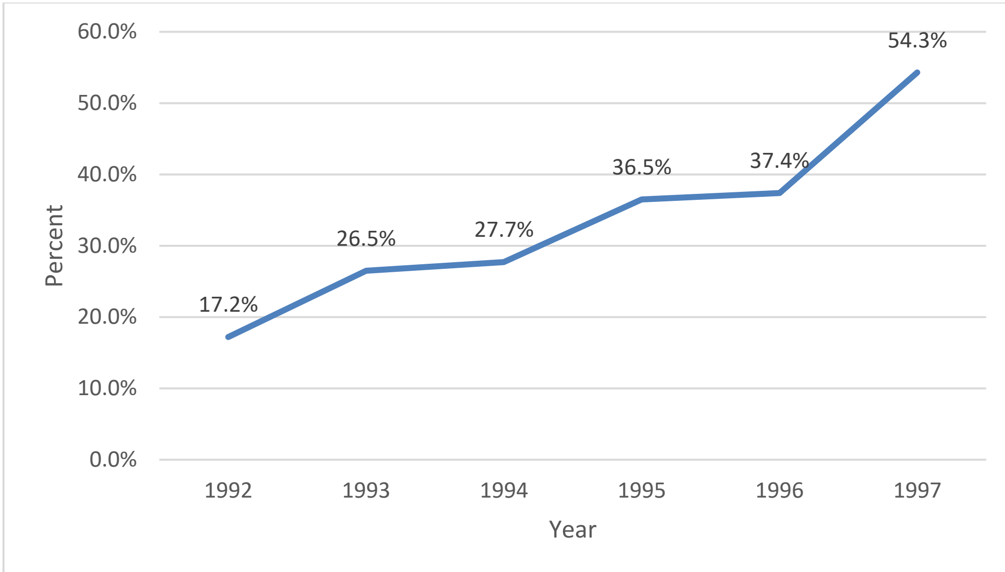

Figure 1. Eritrea's Share of Petroleum Products (1992-1997)
Source: IMF, *Staff Country Report*, 1995 to 1998.

How Eritrea's share of petroleum products was determined remains a mystery, considering that Eritrea's population was about 6 per cent of Ethiopia's and its GDP about 10 per cent of Ethiopia's in the 1990s. Particularly striking is Eritrea's share of more than 54 per cent in 1997; such a disproportionate and exploitative allocation is indefensible by any criterion. Moreover, Eritrea's share of certain key petroleum products was inexplicably much higher than Ethiopia's throughout the years of the common market. In 1996, for example, Eritrea received, 51 per cent of the jet fuel, 76 per cent of the automobile diesel, and more than 78 per cent of the kerosene (used by households) produced at the refinery (IMF, 1998); this, despite the fact that Ethiopia had many more airplanes and vehicles than Eritrea and a population about fifteen times greater. Having supplied most of these products to Eritrea at low prices, Ethiopia was forced to buy the shortfall it needed for domestic consumption on the international market. Furthermore, Ethiopia had to pay for the spare parts of the machinery used at the refinery in US dollars, on top of the refinery fees, the costs of maintenance, the replacement of chemicals, and the salaries of the Eritrean employees in birr (IMF, 1995). Given that Ethiopia incurred other costs such as constructing the refinery, buying crude oil, transporting the oil to the refinery and refining the products, there was no rationale for giving Eritrea such a high proportion of the refined products. The arrangement not only supplied Eritrea with all the petroleum products it needed, but allowed the EPLF to pay low prices for the petroleum products at the refinery and to sell them at high prices to distributors throughout Eritrea, generating considerable revenue for the regime, as shown by the data on production, distribution, and wholesale price of petroleum products at the refinery, and the retail price of petroleum products in Asmara (IMF, 1995, 1997, 1998). Along with generating profit for the EPLF, Ethiopia, by selling the refined products to Eritrea in birr, saved the EPLF a large amount of foreign exchange during the years of the common market. Between 1992 and 1997, my calculations show that Eritrea spent a total of birr 5.7 billion, saving about US $200 million when converted at the prevailing average auction exchange rate for each year.

Ethiopia's use of the "free" ports of Massawa and Assab, while generating direct and indirect economic benefits for Eritrea, was costly for Ethiopia, and when the EPLF demanded that its share increase to 40 per cent and that Ethiopia pay an additional birr 56 million for using the refinery (Trevilli, 1998) in 1997, the Ethiopian government eventually started looking for alternative sources of refined petroleum products on the international market. Predictably, the government found it much cheaper to buy the refined products on the international market than to incur the exorbitant cost in cash and kind to the EPLF. Ethiopia's decision to stop using the Assab Refinery delivered a major financial blow to the Eritrean regime.

Remittances of Eritreans Living in Ethiopia to the EPLF

Remittance, comprising the 2 per cent income tax that the EPLF levies on Eritreans living abroad and the cash they send to support their families in Eritrea, have been a major source of revenue and foreign exchange for the Eritrean government. Styan (2007) claims that remittances account for about one-third of Eritrea's GDP. The IMF, on the other hand, estimates remittances amounted to 50 per cent of Eritrea's gross national income in the early 1990s (IMF, 1996), by far the largest proportion in the world. Remittances have been particularly important in financing imports for Eritrea.

In the early 1990s, the IMF reported that the ratio of remittances to imports was 60 per cent, again one of the highest ratios in the world (IMF, 1996). Given the importance of remittances to Eritrea's economy, how much did Eritreans living in Ethiopia contribute to the Eritrean government between 1991 and 1998? To understand the magnitude of their contributions, first we need to know how many Eritreans were living in Ethiopia in the 1990s, along with their average income. The number of Eritreans migrating to Ethiopia increased after the new government assumed power in 1991 (Kidane, 1999). Kidane, an EPLF official, claims that there were 550,000 Eritreans living in Ethiopia in the late 1990s. How much did they contribute to the Eritrean government? Since there are no data on the remittances of Eritreans living in Ethiopia during the common market years, one is forced to estimate the amount relying on different data sources. When the Ethiopian government deported 70,000 Eritreans in 1998, declaring that they posed security threats to Ethiopia, they lost their businesses, livelihoods, and assets. Kidane (1999) asserts that in total they lost US $800 million worth of assets, which implies that on average, every deported Eritrean was a millionaire with an average asset of US $11.43 million, a highly-exaggerated assertion. To illustrate approximately how much cash Eritreans living in Ethiopia contributed to the Eritrean treasury, assuming that out of the 550,000 Eritreans (Kidane, 1999) living in Ethiopia only one-fourth contributed birr 100 per month (not a heavy burden for a relatively well-off individual), the EPLF collected an estimated amount of birr 165 million per year between May 1991 and May 1998, for a total of more than birr 1.3 billion.

The Flow of Labor, Goods, and Services

The agreements signed by the Meles Zenawi and Isais Afeworki governments provided for the free flow of labor, goods, services, and capital between the two countries, with the assumption that these would result in mutual benefits, as postulated by economic theory and supported by empirical findings from other countries; yet, in reality the benefits accrued mostly to Eritrea. Let's start with the migration of people between Eritrea and Ethiopia. Although there had been inter-migration of people between Eritrea and Ethiopia when it was part of Ethiopia, more Eritreans crossed over into Ethiopia because of better economic opportunities in the rest of Ethiopia. In the 1980s, the war for independence reduced the net migration of Eritreans to other parts of Ethiopia (Kidane, 1999), but after Eritrea became independent, the close alliance forged between the two fronts improved the political, social, and economic standing of Eritreans living in Ethiopia, attracting many to migrate to Ethiopia until the outbreak of the war in 1998. The TPLF, in its determination to stay in power through practicing ethnic politics, viewed the Tigrigna-speaking Eritreans as its natural allies (Tesfai, n.d) and treated them favorably; so much so that under the TPLF-controlled government, Eritreans living in Ethiopia enjoyed more privileges than Ethiopians, many holding high positions in the government and owning lucrative businesses (Abbink, 1998; Kidane, 1999*)*. While Eritreans were migrating to Ethiopia after 1991, the EPLF was busy deporting Ethiopians living in Eritrea. The exact number of Ethiopians deported by the Eritrean authorities is unclear; the reported figure varies between 126,000 (Yohannes, 1999) and 150,000 (Gilkes as cited in Khadiagat, 1999).

The precise figure for the number of deportees may be lacking, but there is no lack of information on the mistreatment of the deportees by the Eritrean government. Abbink (1998) reports that these people were expelled "[W]ithout any of their possessions" (p. 560). Woldemariam (2015) notes, "The expulsions took place in June of 1991 and caused a serious humanitarian crisis within Ethiopia that was only averted through emergency assistance from the US government" (p. 177). The US government may have provided some humanitarian aid, but the assistance was inadequate as the deported Ethiopians remained destitute (Abbink, 1998). Although these Ethiopians lost their homes, property, businesses, livelihoods, and dignity, the transitional government of Ethiopia was conspicuously silent about their plight; it provided no moral, social, or financial support. Abbink (1998) reports, "Many thousands of them today still live in the streets of Addis Ababa in self-built shanties of plastic, stones and corrugated sheets, jobless and without government support" (p. 560). The Eritrean government abused them, the Ethiopian government snubbed them, and the international community ignored them. (There was no Amnesty International report on their inhumane treatment.) Because of the close relationship between the two regimes in 1991, as Abbink (1998) writes, "[S]tories about maltreatment, abuse and killings of Ethiopians in Eritrea at that time [were] suppressed for seven years" (p. 560). Ironically, Isaias Afeworki was advocating the free flow of labor between Ethiopia and Eritrea and facilitating the migration of Eritreans to Ethiopia by demanding that they be treated like Ethiopians, while deporting thousands of Ethiopians (Trevilli, 1999; Asrat, 2014).

Eritrea's Trade with Ethiopia

The free flow of goods and services constituted an important aspect of the *de facto* Ethio-Eritrean common market, as outlined in the 1993 Friendship and Cooperation Agreement and the subsequent pacts. To assess the direction, volume, and value of the flow of imports and exports between the two countries, it was to necessary to rely on data supplied in IMF reports, but most of the trade between the two countries was unrecorded and conducted through the informal sector, as is the case with most international trade taking place among developing countries, especially in Africa. Even though there are no estimates on the volume of informal trade between the two countries, the IMF (1995) states that it was much larger than the official trade statistics indicated.

Eritrea's Imports from Ethiopia

During the common market period, Eritrea imported agricultural inputs duty free from Ethiopia for its manufacturing sector, principally leather, but among Eritrea's imports from Ethiopia, food was the most important item. The official data demonstrate that Eritrea imported a large proportion of its food from Ethiopia; between 1992 and 1997, 30 per cent of Eritrea's food imports came from Ethiopia (IMF, 1995–1998). If we take into account the unrecorded food imports from Ethiopia, Ethiopia should account for at least 50 per cent of Eritrea's total food imports. Although both countries have not achieved self-sufficiency in food production, food imports from Ethiopia supplemented Eritrea's food supply, especially during drought. Other than contributing to Eritrea's food supply, food imports from Ethiopia benefitted Eritrea's economy in other ways as well. Food imports from Ethiopia at relatively low prices, paid in birr, saved Eritrea foreign exchange, reduced the trade deficit (because of the informal food imports), kept the rate of inflation low, decreased the cost of manufacturing, and enabled Eritreans to enjoy a higher standard of living than they do today.

Eritrea's Exports to Ethiopia

Eritrea's manufacturing sector has been integrated with Ethiopia's economy ever since its inception during Italian colonialism; the Italians established light manufacturing in Eritrea to sell their products mostly in Ethiopia. The integration of Eritrea's manufacturing with Ethiopia's economy accelerated after Eritrea became part of Ethiopia, and was affected by the economic policies of the previous governments in Ethiopia. To promote industrialization in Ethiopia the Haile Selassie and Derg governments followed a policy of import substitution in which they protected domestic manufacturers from foreign competition by imposing high tariffs on imported goods (Aberra, 1987). Since Ethiopia's manufacturing sector in the 1960s and early 1970s was concentrated in Addis Ababa and Asmara (Gilkes, 1975, p.147), Ethiopia's import substitution policy benefited factories located in Eritrea as well (Aberra, 1987; Gilkes, 1975). After Eritrea became independent, the transitional government extended the tariff protection to Eritrea's manufacturing sector, as though Eritrea were still part of Ethiopia. The Eritrean government took advantage of the tariff protection and the common market arrangements, exporting virtually all of Eritrea's manufactured goods to Ethiopia, as shown in Table I below.

Table 1

Ethiopia's Share of Eritrea's Export of Manufactured Goods (1992–1997)

Exports	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**Average**
Beverages and tobacco	70.4	87.5	90.4	90.2	98.1	95.8	**88.7**
Crude materials	86.8	86.4	55.8	73.9	74.8	73.0	**75.1**
Animal and vegetable oils	NA	NA	NA	100	96.2	97.1	**97.8**
Chemicals and related products	100	48.8	90.4	91.7	85.1	67.8	**80.6**
Manufactured goods	99.4	32.9	54.7	68.1	67.3	59.9	**63.0**
Machinery and transport equipment	101.5	85.7	87.4	68.8	74.7	53.3	**79.3**
Misc. manufactured articles	99.8	84.1	90.6	87.5	71.5	97.1	**88.4**
Total	**93.0**	**70.9**	**78.2**	**82.9**	**85.1**	**77.7**	**81.9**

Note: Numbers in Percent.

Source: IMF, *Staff Country Reports*,1995 -2003.

Using the trade data provided in the IMF reports, I have reproduced in Table 1 the proportion of Eritrea's export of manufactured goods to Ethiopia between 1992 and 1997. The table shows that between 1992 and 1997, on average, Ethiopia accounted for close to 82 per cent of Eritrea's total exports of manufactured goods. If we examine specific products, we realize that during this period, on average, Eritrea exported close to 90 per cent of its beverages and tobacco, more than 75 per cent of its crude materials, close to 100 per cent of its animal and vegetable oils, and more than 80 per cent of its chemicals and related products to Ethiopia. Moreover, the EPLF acted as an intermediary for some of Ethiopia's international trade. It imported manufactured goods from abroad and sold them to Ethiopia at a higher price, making a profit on the transaction. The IMF data indicate that not all of Eritrea's exports to Ethiopia were produced in Eritrea; some were manufactured elsewhere and re-exported to Ethiopia. It is not unusual for countries to re-export products, and so the question is not why the EPLF bought foreign goods and sold them to Ethiopia at a profit, but why the Ethiopian government would use a middle trader and pay high prices when it could have imported the products directly from the producers itself.

Estimating the Physical Assets Appropriated by the EPLF

The favourable treatment of Eritrea by the Ethiopian government extended beyond the common market arrangement. The transitional government allowed the EPLF to assume the ownership of all of Ethiopia's physical assets located in Eritrea without proper accounting, public consultation, or fair compensation. When Eritrea seceded from Ethiopia in 1991, the EPLF inherited the physical assets and infrastructure in Eritrea such as hospitals, schools, government buildings, airports, seaports, highways, roads, and the buildings and factories of state-owned enterprises, all belonging to Ethiopian and Eritrean taxpayers. The EPLF also acquired the physical assets of the Ethiopian military, the Ethiopian Air Force, the Ethiopian Navy, Ethiopian Airlines, and Ethiopian Shipping Lines. The total value of the physical assets appropriated by the Eritrean regime may be billions of dollars, but the exact amount is unknown since there has been no official report from either government. With no public data available on the value of the physical assets that the EPLF inherited at the time of Eritrea's independence, one is forced to estimate it. I have estimated the total value of physical assets in Eritrea at the time of independence and Ethiopia's share of those assets. As the extensive literature on capital evaluation underscores, there are a few theoretical and measurement problems in estimating the value of capital (Sen, 1974; Pasinetti, Fisher, Felipe, McCombie & Greenfield, 2003). To avoid these estimation problems, it was necessary to use a simple statistical technique that economic historians like Piketty (2014) and development economists use in estimating the value of capital: the historical capital-output ratio. I realize that using the capital-output ratio does not solve the problems associated with measuring capital; it simply assumes it away.

Still, these theoretical and data limitations notwithstanding, to get an idea of the value of physical assets in Eritrea at independence required estimating the average capital-output ratio on the basis of a simple Harrod-Domar growth model. The model shows that the capital-output ratio can be computed, given the savings rate and GDP growth rate. Using this equation, the estimated average capital-output ratio for Ethiopia between 1982 and 1992 is 2.4. Instead of using the data for only 1992, the savings and growth data for Ethiopia between those years was used to obtain a representative average capital-output ratio. This ratio is consistent with what one expects for a typical least developed country, one of the stylized facts of developing countries.

It was assumed that the capital-output ratio in Eritrea in 1992 was the same as it was in Ethiopia; an assumption that reflects the economic realities of a country with a similar low per capita GDP, low capital investment, and low capital productivity. To estimate the amount of Eritrea's physical assets at independence, based on a capital-output ratio of 2.4, it was important to know Eritrea's GDP in May 1991, but since there are no macroeconomic data for Eritrea in 1991, Eritrea's GDP of 1992, US $5.9 billion (in constant 2005 US dollars) (World Bank, 2015), was used. This suggests that, with the assumed capital-output ratio of 2.4, the estimated total value of physical assets in Eritrea in 1992 was US $14.2 billion.

But since physical capital includes land and non-land capital, the estimated amount of total capital has to be divided between the two categories of capital. If we take the IMF's estimate that in the early 1990s agriculture contributed to about one-third of Eritrea's GDP (IMF, 1995), and if we assume that the distribution in the value of land and the value of other assets was proportional to their share of Eritrea's GDP, the estimated total value of land in Eritrea was close to US $4.3 billion in 1992; and the remaining US $9.9 billion was the estimated value of the non-land physical capital. In the absence of data on the net flow of funds between Eritrea and the rest of Ethiopia, it is reasonable to conservatively assume that at least 30 to 50 per cent of the funds spent on capital expenditures in Eritrea came from the rest of Ethiopia. The moderate figures suggest that the estimated value of physical assets in Eritrea belonging to the Ethiopian people varied between US $3 and $5 billion in 1992. It is understood that one may dispute the exact value of the assets seized by the EPLF, but one cannot dispute that the EPLF owes money to the Ethiopian taxpayers for the assets it appropriated in Eritrea.

Military Assets Acquired by the EPLF

While one can debate as to what proportion of Ethiopia's physical assets in Eritrea was seized by the EPLF, there is no question about how much of Ethiopia's military assets the EPLF captured in Eritrea: almost all of them. If we assume that Eritrea contributed on average 13 per cent of the revenue collected by the previous regimes in Ethiopia, the same proportion as its share of Ethiopia's GDP in 1992, and that tax revenues were proportionally used to pay for military equipment, hardware, and other assets, only 13 per cent of the military assets captured by the EPLF belonged to Eritrea. In reality, the Derg allocated more than 13 percent of its budget to military spending and borrowed the money to finance its military expenditures, some of which has already been paid back and some of which will be settled by Ethiopian taxpayers. Once again, neither government has provided such data, but there is no question that the EPLF acquired a large amount of military assets when the Ethiopian army was defeated in Eritrea. To the victor belongs the spoils of war.

Estimating Eritrea's Share of the External Debt

When a country disintegrates into separate states, as Yugoslavia and Czechoslovakia did, the successor states agree, usually under the auspices of the IMF and the World Bank, on how to equitably divide the assets and outstanding debts of the former country on the basis of a mutually acceptable formula (Stahn, 2002; Williams, 1994). The criteria for sharing the assets, debts, and other obligations among the successor states could include the relative share of the successor state's contribution to the former country's GDP, population, tax revenue, government expenditures, or other variables (Stahn, 2002; Williams, 1994). When Eritrea separated from Ethiopia in 1991 and later declared independence in 1993, there was no official agreement on the division of Ethiopia's assets and national debt between Eritrea and Ethiopia. In fact, in the words of Abbink (1998), "[N]othing was negotiated" (p. 562). There was only a private discussion between Meles Zenawi and Isaias Afeworki in which the Ethiopian autocrat agreed to transfer Ethiopia's assets in Eritrea worth billions of dollars to the EPLF, and to cancel Eritrea's share of Ethiopia's national debt. Further, Meles Zenawi agreed to share Ethiopia's foreign aid with Eritrea between 1991 and 1993 (Woldemariam, 2015).

Meles Zenawi forgave Eritrea its share of Ethiopia's outstanding external and internal debt, without any authority from the Ethiopian people or the Ethiopian parliament, and, thanks to this generosity, Eritrea started its nationhood debt free. Unlike estimating the value of physical capital that the EPLF inherited, computing Eritrea's share of the external debt is relatively straightforward since there are official records of the debt with the lending countries and international institutions.

To give the reader an idea of Eritrea's share of the national debt when it became independent, one of the most frequently used criteria in settling such disputes was utilized: a successor state's share of the former country's GDP (Stahn, 2002; Williams, 1994). In 1992, Eritrea's share of Ethiopia's GDP was 13 per cent, and this proportion can be used to estimate Eritrea's share of Ethiopia's national debt. The national debt includes domestic debt, but only Ethiopia's external debt was taken to estimate Eritrea's share. When Eritrea became formally independent in 1993, as indicated by data from the World Bank, Ethiopia's external debt was US $9.7 billion in current dollars. If we assume Eritrea's share of the debt was equal to 13 per cent of the total debt, the same as its contribution to Ethiopia's GDP, its share of the debt in 1993 was US $1.25 billion, a conservative estimate because the calculation is based on equating the proportion of Ethiopia's external debt spent in Eritrea with Eritrea's share of Ethiopia's GDP. The previous governments considered Eritrea strategically important and allocated proportionally more of the national budget to Eritrea than to any other province. If we assume they spent between 25 and 33 per cent of the national debt in Eritrea, its share of the debt becomes much higher; it varies between US $2.4 billion and US $3.2 billion, a huge birthday gift given to a breakaway province by a generous Ethiopian government.

It is true that Ethiopia, as one of the most heavily indebted countries, had some of its external debt written off, and it is possible that Eritrea's share may have been written off as well, but that is not the point. The point is equity, fairness, and accountability in sharing assets and liabilities, as acknowledged by the former governor of the National Bank of Eritrea (Welde Giorgis, 2010). Why would an Ethiopian government, least of all an unelected, unrepresentative government, take it upon itself to forgive 100 per cent of Eritrea's share of the external debt while transferring a huge amount of Ethiopia's wealth to Eritrea without any authority from the Ethiopian public or its representatives? Meles Zenawi's unprecedented act of generosity raises serious questions about his stewardship of Ethiopia's national economic interests.

Conclusion

The decision of the transitional government to enter into a preferential trade agreement with the EPLF that benefitted Eritrea was not due to its carelessness, negligence, indifference, naiveté, hubris, or incompetence. It was a rational political decision that the TPLF leadership made to consolidate its grip on power in the early 1990s, but it resulted in a net economic loss for Ethiopia and a net economic gain for Eritrea. The common market allowed the EPLF to transfer a large amount of Ethiopia's resources, worth billions of dollars, to Eritrea over eight years. The transferred resources generated income, foreign exchange, and employment for Eritrea. Khadiagata (1999, p. 43), for example, asserts that the common market produced some 300,000 jobs in Eritrea. Beyond the common market, the strategic alliance that the two fronts forged in the early 1990s, in part based on their shared negative attitude if not outright enmity towards Ethiopia, enabled the EPLF to acquire Ethiopia's physical assets in Eritrea and to forego Eritrea's share of Ethiopia's national debt without any compensation or obligation to Ethiopia. The preferential treatment of Eritrea at the expense of Ethiopia by the TPLF-controlled government is emblematic of its resolve, even today, to stay in power by pursuing policies that undermine Ethiopia's economic interests, national unity, and political transformation to democratic governance.

References

Aakalewld. K. (1966). Introductory paper on the Assab petroleum refinery. Retrieved from http://www.ajol.info/index.php/zj/article/viewFile/120556/110008.

Abbink . J. (1998). Briefing: The Eritrean-Ethiopian border dispute. *African Affairs*, 97(389), 551-565.

Aberra. W. (1987). The import substitution policy of Haile Selassie's government: An assessment. CDAS Discussion Papers N0.45. Montreal: Centre for Developing-Area Studies, McGill University.

Asrat. G. (2014). *Sovereignty and democracy in Ethiopia (in Amharic. 3rd edition)*. Addis Ababa

Baldwin. R.E. (1989) The political economy of trade policy. *The Journal of Economic Perspectives*, 3(4), 119-135.

Beckerman. W. (2011). *Economics as applied ethics*. Palgrave: Macmillan.

Burfisher. E.M., Robinson. S., Thierfelder. K. (2001). The Impact of NAFTA on the United States. *The Journal of Economic Perspectives,* 15(1), 125-144.

Eggertsson. T. (1998). Limits to institutional reforms. *The Scandinavian Journal of Economics*, 100(1), 335-357.

Ehrlich, S. D. & Hearn. E. (2014). Does compensating the losers increase support for trade? An experimental test of the embedded liberalism thesis. *Foreign Policy Analysis*, *10*, 149–164.

Ethiopian Satellite Radio and Television (ESAT). (2015, February). ESAT Interview with Isaias Afwerki, President of the State of Eritrea, Feb 2015. Retrieved from https://www.youtube.com/watch?v=ARmzzJPKIE8

Gebremedhin. J. (2013). *Romanticising the Gheldi*. Retrieved from. https://dissidentdiaries.files.wordpress.com/2013/06/romanticizing_ghedli.pdf.

Gilkes. P. (1975). *The dying lion: Feudalism and modernization*. New York: St. Martin's Press.

Gilpin, R. (2001). *Global political economy: Understanding the international economic order*. Princeton: Princeton University Press.

Giorgis. A. W. (2010). *Nation building, state construction and development in Africa the case of Eritrea.* Bonn: Friedrich Ebert Stiftung.

Grossman. G. M. & Helpman. R. (1994). Protection for sale. *The American Economic Review*, *84*(4), 833-850.

Hailemariam. Y. (2010). *To whom does Assab belong (In Amharic)?* Addis Ababa: Etafzer.

Hartigan. J.C. (1996). Predatory dumping. *The Canadian Journal of Economics / Revue canadienne d'Economique*, *29*(1), 228-239.

IMF. (1995). *Eritrea: Recent economic developments* (IMF Staff Country Report, No. 95/4). Washington. D.C: IMF.

IMF. (2000). *Statistical appendix*. IMF Staff Country Report (No. 00/55). Washington. D.C: IMF.

IMF. (1996). *Eritrea: Recent economic developments* (IMF Staff Country Report No. 96/66). Washington. D.C: IMF.

IMF. (1997). *Eritrea: Selected Issues* (IMF Staff Country Report No. 97/88). Washington. D.C: IMF.

IMF. (1998). *Eritrea selected issues* (IMF Staff Country Report No.98/91). Washington. D.C: IMF.

IMF. (1999). *Ethiopia: Recent economic developments* (IMF Staff Country Report No. 99/98). Washington. D.C: IMF.

IMF. (2003a). *Eritrea: Article IV Consultation* (IMF Staff Country Report No.03/165). Washington. D.C: IMF.

IMF. (2003b). *Eritrea: Selected issues and statistical appendix* (IMF Staff Country Report No. 03/166). Washington. D.C: IMF.

Isaak. R.A. (2005). *The globalization gap: How the rich get richer and the poor get left further behind*. New Jersey: Prentice Hall.

Iyob. R. (2000). The Ethiopian–Eritrean conflict: diasporic vs. Hegemonic states in the horn of Africa, 1991-2000. *The Journal of Modern African Studies*, *38*(4), 659-682.

Jerven. M. (2013). *Poor numbers: how we are misled by African development statistics and what to do about it. New York:* Cornell University Press.

Kendie. D. (2005). *The five dimension of the Eritrean conflict 1941 - 2004: Deciphering the geopolitical puzzle.* Salt Lake City: Signature Publishing.

Khadiagata. G.M. (1999). Reflections on the Ethiopia-Eritrea border conflict. *Journal of Democracy*, *23*(2), 39-59.

Kidane. R. (1998). What is the underlying reason behind the deportation? Background to the deportation of Eritreans from Ethiopia. Retrieved from. http://www.ehrea.org/DEPORt.htm

Letta. L. (Editor). (2007). The conflict between Ethiopia and Eritrea. *Proceedings of Scholarly Conference on the Ethiopia-Eritrea Conflict held in Oslo, Norway, 6-7 July 2006*. Oslo: Fafo.

Maggi, G., & Rodríguez-Clare, A. (2007). A political-economy theory of trade agreements. *The American Economic Review*, *97*(4), 1374-1406.

Mansfield, E. D., & Milner, H. V. (2012). *Votes, vetoes, and the political economy of international trade agreements.* New Jersey: Princeton University Press.

Milner, H. V. (1999). The political economy of international trade. *Annual Review of Political Science*, *2*, 91-114.

Pasinetti, L. L., Franklin, M., Fisher. M. F., Felipe, J. J., McCombie, S. L., & Greenfield, R. L. Cambridge capital controversies. *The Journal of Economic Perspectives*, *17*(4), 227-232.

Piketty, T. (2014). *Capital in the Twenty-First Century*. Boston: Harvard University Press.

Reid, R. (2003). Old problems in new conflicts: Some observations on Eritrea and its relations with Tigray, from liberation struggle to inter-state war. *Africa: Journal of the International African Institute*, *73*(3), 369-401.

Sen, A. (1974). On some debates in capital theory. *Economica*, *41*(163), 328-335.

Srabo, D. M. (2007). Ethiopia and Eritrea: Short-sighted solutions long term problems. In L. Letta (Editor), *The conflict between Ethiopia and Eritrea: Proceedings of Scholarly Conference on the Ethiopia-Eritrea Conflict held in Oslo, Norway, 6-7 July, 2006 (*pp.41-52). Oslo: Fafo.

Stahn, C. (2002). The agreement on succession issues of the former Socialist Federal Republic of Yugoslavia. *The American Journal of International Law, 96*(2), 379-397.

Stiglitz, J. (2000). *Economics of the public sector*. New York: W. W. Norton.

Stiglitz, J. (2007). *Making Globalization Work*. New York: W. W. Norton.

Styan, D. (2007). Border conflict and its impact on youth. In S. Healy (Ed.), *Eritrea's Economic Survival: Summary Record of a Conference held on 20 April 2007* (pp. 13-22). London: Chatham House.

Tesfai, A. (n.d.). The cause of the Eritrean-Ethiopian border conflict. Retrieved from http://dehai.org/conflict/articles/alemsghed.html

Trivelli, R. M. (1998). Divided histories, opportunistic alliances: Background notes on the Ethiopian-Eritrean war. *Africa Spectrum, 33*(3), 257-289.

Uwe Walz, T. T. (2000). Market share, cost-based dumping, and anti-dumping policy. *The Canadian Journal of Economics / Revue Canadienne d'Economique, 33*(1), 69-86.

Venables, A. J. (2003). Winners and losers from regional integration agreements. *The Economic Journal, 113*(490), 747-761.

Viner, J. (1922). The prevalence of dumping in international trade: II. *Journal of Political Economy, 30*(6), 796-826.

Williams, P. R. (1994). State succession and the international financial institutions: Political criteria v. protection of outstanding financial obligations. *The International and Comparative Law Quarterly, 43*(4), 776-808.

Woldemariam, M. (2015) Partition problems: Relative power, historical memory, and the origins of the Eritrean - Ethiopian war. *Nationalism and Ethnic Politics, 21*(2), 166-190. DOI: 10.1080/13537113.2015.1032026

World Bank. (2000). *Interim support strategy for the state of Eritrea.* (Report No. 21152). Washington D. C: World Bank.

Yohannes, O. (1993). Eritrea: A country in transition. *Review of African Political Economy*, *57,* 7-28.

Rural Women and the Land Question in Zimbabwe: The Case of the Mutasa District[3]

Bigboy Toro, University of Fort Hare, South Africa

Abstract

Zimbabwean rural women make significant contribution to agriculture and are the mainstay of farm labor. Although they do the majority of agricultural work, men, for the most part, continue to own the land, control women's labor and make agricultural decisions supported by patriarchal social systems. Women's access to land is usually through their fathers, husbands, brothers or sons. This has made it difficult for women to gain equal access to land under the Fast Track Land Reform Programme (FTLRP). Findings indicate that there are a number of challenges and constraints that are experienced by rural women under the FTLRP, which include male land registration, inadequate farming support mechanisms, lack of awareness of government laws and policies concerning women land rights. This is exacerbated by cultural and traditional practices, which disadvantage them in favor of men, as in the inheritance of land and property in the household. To improve women's access to land in the future, the study recommends that serious intervention by the state should occur coupled with the revitalization of the land reform program. This also calls for a paradigm shift towards an effective food security program, which puts emphasis on women and their impact in agriculture.

Keywords: FTLRP, agriculture, patriarchy, women.

Introduction

There is a growing recognition of the significance of land tenure among women in the sustainable development process in Zimbabwe. Land is a fundamental resource to most women in Zimbabwe and is essential for enabling them to lift themselves out of the shackles of poverty.

In Zimbabwe, women constitute 53% of the population and 86% of those residing in the countryside depend on land for their livelihoods, and they provide 70% of all agricultural labor (Women and Land in Zimbabwe, 2008). One would expect that women would be considered an integral part of the FTLRP in line with their important roles in agricultural production and labor reproduction (Mann, 2000). The FTLRP seems not to adequately meet the needs of the poor and landless, and the needs of women, in particular, continue to be neglected.

Women's access and control of land has become more critical in developing countries like in Africa as land is a major resource for survival to the majority of people, especially rural women. Nevertheless, the gendered discourses on access, ownership and control of land have prevailed and dominated pre-colonial, colonial and post-independence Zimbabwe. The perverse social relations in pre-colonial society were contrived during colonial and contemporary times by the male domination in the socio-economic and political power structures. One thread which links the

[3]This paper based on a master's theses with the same title.

pre-colonial, the colonial, and the post-independence experiences is the consistent denial to women of the right to independent access to land, and to the control of the resources produced by the combination of land and labor.

Zimbabwe land reform may seem ironic, especially in the light of the country's current land reform efforts, which appear to be motivated more by racial or political considerations and less by arguments regarding economic efficiency, gender balance, social equality or poverty reduction. Lack of land rights deprive women the right to economic empowerment and their struggle for equality and equity within a patriarchal society (Wiggins, 2003). The male dominated Zimbabwean government also adopted a 20% quota for women during the land reform program. It is not clear how and why this quota was arrived at and what validation was given for this quota as a yardstick for fair distribution of land to women. This justifies the need to pay attention to gender dimensions in the FTLRP as an entry point to address gender differentiated opportunities in development towards equal access to land and food security.

Despite women central roles in agriculture production across the region, it is agonizing to see that they are often excluded from property and land ownership on gender grounds. In general, a women's rights to land are extremely insecure. The major forms and sources of this unequal land distribution and tenure problem is its derivation from the dominance of patriarchy and customary land tenure systems and traditional authority structures (Mpahlo, 2003). The traditional structures of power and authority continue to marginalize rural women's access to land. In this scenario, women are frequently believed to only have secondary rights to land, thus making them reliant on their husbands, male relatives and social networks.

On the other hand, the majority of rural women are often poor and too illiterate to deal with bureaucratic procedures that are necessary to gain access to land ownership or fight for their land rights (Mgugu, 2008). This lack of access to land threatens women's security and leaves them vulnerable to poverty. Access and control of land can provide women with security they cannot derive from elsewhere and allows socio-economic independence, hence, often challenging the very political or customary expediency that is responsible for women's marginalization.

Women's limited access to land has also hindered them in accessing credit facilities. Land is the only or major asset of the rural women that they can use as collateral security in acquiring bank loans. Denial of secure land property rights make it difficult for women to access credit facilities. Lack of credit obstructs their agricultural potential. This is worsened by insecure government policies and an inadequate farming support system. However, it is argued that women's access to land and other agricultural supporting mechanisms can lead to positive effects on national and household food security levels.

Theoretical Framework and Methodology

The Gender and Development (GAD) approach, which has been underway since the 1980s, was partly borne out of recognition of the inadequacies of focusing on women in isolation. The approach emphasizes the historically and socially constructed relations between men and women (Moser, 1993). This allows for a deeper understanding of the relational nature of the gendered power, and of the interdependence of men and women. The GAD approach was projected towards strengthening the effectiveness of development work in improving the situation of both women and men, and achieving progress towards social and gender equality.

The GAD approach emphasizes the reduction of the gender gap between women and men in order to achieve gender balanced development. This is crucial for most Zimbabwean women who have been left out of the national economic development structures and institutions. Beyond improving women's access to the same development resources as are directed to men, the GAD approach stresses direct challenges to male cultural, and social and economic privileges, so that women are enabled to make equal social and economic profit out of the same resources (Goetz, 1997). A GAD perspective leads not only to the design of interventions but to affirmative action strategies that will ensure that women are better integrated into on-going development efforts. It leads, inevitably, to a fundamental re-examination of social institutions and structures, and ultimately, to the loss of power of entrenched local elites, which can have positive effects on women as well as men.

Policies and projects designed from a GAD standpoint would question traditional and cultural views of gender roles and responsibilities. This points towards a more equitable definition of the very concept of "development" and of the contributions made by men and women to the attainment of individual and societal goals. The GAD approach was of importance to the study as it seeks to correct systems and mechanisms that produce gender inequality by focusing not only on women, but also on assessing the socio-economic status of both men and women.

Sample Size and Technique

The choice for the sample size was mainly based on the need for accuracy required by the researcher and the degree of variation in the sample. The informants in this study consisted of 100 women from rural villages in Mutasa District. Mutasa District is one of the seven districts in Manicaland Province. Manicaland forms part of the ten administrative provinces in Zimbabwe. This study mainly focused on women experiences and the challenges they face in accessing land under the FTLRP. The study used purposive sampling to select informants. This type of sampling permitted the selection of interviewees whose qualities or experiences permit a deeper understanding of rural women and the land question in Zimbabwe. Purposive sampling was very useful in making sure that people who do not fit the requirements are easily eliminated from the sample.

Research Instruments and Analysis

The researcher used semi-structured interviews and secondary data as research instruments. The main reason interviews were carried out as opposed to handing out questionnaires is that some respondents are illiterate in their own language and would not be able to fill out a questionnaire, but could participate in an interview allowing for richer and complex data to be collected. Semi-structured interview questions were also used to allow participants to engage in a process of exchanging information and experiences they have had in accessing land under the

FTLRP. Moreover, interviews were used to elucidate the participants' perceptions of the world without imposing any of the researcher's views, therefore, avoiding bias and achieving greater reliability (Babbie et al., 2001). The idea was to allow the respondents to express their opinions, concerns or views as freely as possible, and this can be done through the semi-structured approach, thus emphasizing the focus on qualitative research.

The interviews were structured by a written interview guide. The interview guide contained main topics and questions. The flexible guide ensured that the interviews stay focused on the development of the issue at hand. Nonetheless, the interviews were conversational enough to allow participants to introduce and discuss issues which they deemed to be relevant. The interviews were recorded using a tape recorder. The researcher only managed to interview four to five respondents per day. After tape recording, the researcher had to listen to each recorded interview repeatedly so as to get the respondents' general feelings about each question. The researcher proceeded by classifying the information into different categories.

The respondents were interviewed in their mother language which is Shona. Knowledge of the language of the people concerned helped the researcher make respondents feel free and comfortable to disclose their personal experiences. This promoted a unique closeness, and a comfortable, safe, relaxed environment in which the respondents felt safe to reveal their inner most feelings, anxieties and experiences. This was enhanced by providing privacy and confidentiality. The interviews were conducted in the participant's own home, preferably with fewer distractions. The respondents were expected to be more open in their own environment as opposed to a busy public environment. Great care was taken to ensure that privacy was maintained and disruptions were minimized.

Secondary sources took the role of explaining, combining and analyzing information from the primary sources. In this study, secondary data was used as a means of triangulating the primary information from the research. The secondary data obtained mainly captured women's access to land in relation to land reform program in Zimbabwe. The information was gathered from documentary sources such as books, journals, the World Bank and IMF documents, newspapers, reports, articles and other research related to this study. The essentials were to review literature about rural women's access and control of land in Zimbabwe. The literature to be reviewed served as both the theoretical and empirical base for the analysis of the data collected. It also supplemented the information gathered during the fieldwork.

On the other hand, data analysis allowed the researcher to understand the constitutive elements of the data collected through an inspection of the relationships between variables and concepts, and to verify changes that could be identified and isolated to establish themes in the data (Mouton, 2001). The data was first transcribed verbatim from the field notes onto a computer. To analyze and summarize the collected data, a descriptive statistical method was employed. To simplify the analysis of gathered information, the collected data was pre-coded before entering it into the computer. The information was grouped according to similarities before it was analyzed. The idea was to eliminate irrelevant data until only data critical to the research was identified and studied.

Discussion of Research Findings

The women were requested to indicate their land ownership status. Data collected on land registration revealed that 56 respondents responded that land was registered in the name of their husbands, 20 respondents responded that land was registered in their own names, 16 respondents responded that land was registered in the name of both spouses, and 8 responded that land was registered and certified in their children's names. The policy of the government is to offer spouses joint tenure, but they do not force couples to apply for joint ownership or to register as individuals. The study noticed that the majority of women who jointly own the land with their husbands are those who are educated. These women participate in farm operations and management decisions through joint ownership with their husbands. Indeed, in general, these partnerships are more successful at running the farms because they have a larger economic resource base from which to pull for farm operations. With joint ownership of land, couples combine the labor, assets, financial resources and information they have in order to produce an agreed upon basket of goods and services. They can then consume or invest the profits they obtain according to their shared priorities.

Some women are not educated but they are married to educated husbands who are wise enough to jointly register the farm in their own names. The study also noticed that rural women who have civil marriages and registered customary marriages have more access to jointly owned land with their husbands, which is unlike those who have unregistered customary marriages. In the event of the death of the husband, if the farm had been registered jointly, the wife would remain registered right holder of the land and the house with the power and authority to mortgage, sell or carry out any other transactions.

Information obtained from respondents on women's involvement in decision-making on land and land related issues reflect that women in male-headed households have little say on what kind of crops to grow, on the amount to be sold and on the amount to be grown for family consumption. Crops were usually marketed through the husband's name and payments received in his name. Due to patriarchal controls, men are seen as powerful thinkers and managers in any development. They are recognized as the custodians or natural owners of land and other family properties. In this scenario, rural women are not given any chance to own property. Hence, gender policies need to be revamped to cater for the needs for co-ownership of property and land by women and strong enforcement of such policies must be put in place.

Most of the farms are separately owned by husbands although women have the right to use the land. Among the participants, land tenure was individualized and invariably adjudicated and registered in the name of "heads of households" or men. The majority of married respondents revealed that land was actually registered in the names of the husbands, because they were the ones who processed all the paperwork. The procedures that were required in order to access land were extremely complex and inaccessible for illiterate, rural women. In fact, these procedures are more suited for men and wealthier or politically connected women. There is also evidence that the land reform program was not formerly planned or structured, but was based on violent, social networking and political beliefs that women were not as strong as men. Few women take part in the violent and chaotic land invasion of white commercial farms in the country. Henceforth, the farms were given to men because of their overarching dominance in land invasions. In general, the FTLRP resulted in a significant change in landholdings by race, class and, to a lesser degree, by gender.

Rural Women and Property Inheritance

Since land is a key asset and an essential source of livelihood, most communities have long developed rules to govern how land is transferred across generations. However, women's ability to inherit land is often restricted. Under customary law, land and other family property is owned by the husband, and widows cannot inherit the family property because a man's claim to family takes precedence over a woman's, regardless of the woman's seniority and age in the family. When the head of the household passes away, most respondents said it is the sons of that person who are supposed to inherit land from other family property. This was confirmed by 66 of those interviewed, whilst 20 said it was the wife who was supposed to inherit the property. Some said that the right to inherit belonged to the brother-in law. This was said by 8 respondents. Only 6 respondents said the right to inherit belongs to daughters.

Older sons are given more preference in property inheritance since they are regarded as the rightful heirs to family property. With respect to inheritance in the event of death, it was unanimously stated that male children were supposed to inherit the farm. The basis for doing so was customary law and patriarchy. The son was the inheritor of the farm because customarily he would be the new head of the household. What was also surprising is that the majority of the women were of the view that the sons, and not the girls, of the deceased were supposed to exercise overall control over the farm. While it is expected that boys would take control of major assets such as cattle and land, the girls were to get clothes and kitchen utensils. It was generally argued that girls could not inherit the land because they got married and left to live with their husbands. The views on inheritance, even by women themselves, reflect the weight of tradition in favor of the male rather than female children. Other respondents said that if there were no male children in the household when the husband dies, the land could revert to the chieftainship because daughters cannot inherit land.

Few respondents (20%) confirmed that they were able to inherit their farm following the death of a husband. However, inheritance practices can leave widows without land resources and livelihoods, unless a widow with minor children is allowed to remain on the land until a son comes of age. It seems that male children have legal rights to inherit the land whilst their mothers continue to exercise their use rights as before. Women and daughters are considered minors who cannot be allocated or inherit land on their own without men. Even if the property is acquired during the marriage union, women cannot inherit it from a traditional perspective. Moreover, with the majority of women having unregistered customary marriages, this means that women face serious property inheritance problems and find themselves without any recourse to redress (Anglophone Africa, 2004). In some instances, widows cannot inherit their husbands' estates even if their marriages were registered. Customs and traditions of various cultures take precedence, and belief in them becomes very strong to an extent that they override legal preference.

The study also identified the cultural practice of lobola (bride price) to be a contributing factor limiting women's access to land. Women are considered to be acquired like any other property. In addition, when women are married, they join their marital family with nothing. In case of separation, divorce or the death of their husbands, women are expected to join their natal families without anything, exactly the way they joined their marital family. If there are no brothers, the late husband's family decides on an appropriate inheritor. The property of the deceased, including his land, is then inherited along with the wife and children. Strong social and economic pressures impel women to be inherited (Agarwal, 2003). Biased inheritance rights often bestow land to male relatives, leaving both widows and daughters at a disadvantage.

The other group that would inherit the farm is the in-laws. In the absence of a son or male heir, the in-laws take the land and property of the deceased. They demand the property of their relatives especially if the widow does not have sons and married through unregistered customs. However, for fear of getting infected with HIV and AIDS, the in-laws no longer inherit widows. They now leave them to re-join their natal families and in the process, the widows lose the land to their in-laws. Exclusion from property inheritance can aggravate women's vulnerability to chronic poverty and the intergenerational transmission of poverty.

Government Policies on Women

The sampled households were asked whether government policies regarding women are adequate to ensure them equal access to land. Of all the respondents 26% said that government policies are adequate whilst 74% said they are not. The problem is that people are unaware of the government policies that ensure that they get access to land under the land distribution program. The study noticed that most women lack access to information about land laws and rights, in particular those associated with inheritance. As the study findings demonstrate, most women in rural areas barely understand these policies, and implementers of the policies have not applied them with a special interest of women's needs. Furthermore, the respondents were dissatisfied with the support they are getting from the government especially in the provision of inputs and marketing of agricultural products. Inputs from the government are mainly received by those who are politically connected to the ruling government, especially war veterans. At the same time, state marketing boards like the Grain Marketing Board (GMB) continues to fail to pay farmers on time. This negatively affects their preparation for the next farming seasons.

Distribution of Farm Work

The respondents were asked about their main source of labor. The study revealed that 24% of the work force comes from hired labor, 6% from husbands, 4% from relatives, and 6% from children. The remaining 60% of the respondents said that they work alone in the field. Most men do not work in the fields as they are engaged in other non-farm activities or are seeking employment in urban centers. The need for labor contribution from wives in this regard is also evident in the trend in the Mutasa District. Wives do most of the work in the fields and in some cases, are helped by their children and relatives. The work hours of women worsen in the farming season when their days would begin at half past four in the morning and end around six o'clock in the evening. Although women's hours of work are increasing, they are gradually becoming more and more marginalized in the ownership of land and farm decisions. In the end, women work in fields which they don’t own although they have the right to use the land. This also limits their potential to maximize production since the husband, who does not work in the field, makes decisions about what the farm produces. This is unjust to the woman who spend most of their time working in the field.

Women Access to Credit Facilities

The respondents were asked whether they have access to credit facilities. Out of the sampled households, only 40% responded that they have access to credit whilst 60% do not. This limited access to rural financial services hampers women’s efforts to improve or expand their farm activities in order to earn cash income to achieve and maintain household food security. The study observed that generally women are afraid to borrow because of the tedious paperwork that requires some proficiency in reading and writing. It was also revealed by the study that women are afraid of the adverse consequences of borrowing. However, these women need access to credit to give them reasonable access to inputs like fertilizer, hybrid seeds and pesticides. In short of these key inputs, women usually gain less benefits from their farmlands, which makes them vulnerable to poverty. Some respondents argued that they cannot access bank loans because of the long distances to reach financial institutions, poor transportation services and high transportation costs.

In addition, the 99-year lease given by the government is unbankable as it cannot be used as collateral security to access credit from the commercial financial institutions. The land is owned by the government so the banks cannot repossess the land in times of default. Arguably, access to credit will increase agricultural productivity and profitable entrepreneurial activity among women. Given women’s particular role within households, increases in women’s income should contribute to increased overall household welfare. Increased access to financial resources may also decrease rural women’s dependence on male relatives, and/or enhance their status within their households and communities.

The Way Forward

Existing legislation for protecting the property rights of Zimbabwean women married under customary law need to be revised and strengthened to help prevent the plight of women on the death of their husbands. Rural women need proper and simple registration of marriage and the issuing of marriage certificates. The traditional leaders should be allowed to certify local marriages. This would help deal with accessibility of legal procedures in marriages at a more local level, and enable the majority of women to have registered marriages. Any intervention that seeks to protect women through registering their marriages needs to be supported by measures that encourage deposed women to seek help through legal channel.

There is need for laws guaranteeing joint ownership of property, and this law needs to be enforced to protect women and children from property grabbing. Registering land in the name of the husband and wife can help reduce the loss of land rights of women, both within the marriage as well as in cases of abandonment, separation, divorce or widowhood (Grown & Gupta, 2005). This cab also increase a woman's bargaining power in household and farm decision making. Gender policies need to be revamped to cater to the need for joint ownership of property and land by women, and stronger enforcement of such policies must to be put in place. The legal processes for joint registration of spouses should be simplified to benefit illiteracy of rural women. It is recommended that the government should run a series of awareness campaigns in order to inform rural people, especially women, of their rights to land as well as other land reform programs.

Safeguarding Women Land Inheritance

Laws on inheritance and divorce also need to be coordinated so women are fully protected by a set clear of laws. Consistent with the findings of the study, it is recommended that laws be updated and reformed to protect women and girls' property inheritance rights across all age groups as women are victims at all ages. Women and daughters are not protected by customary laws of inheritance, and statutory law has not yet challenged community customs and traditions. Change is needed in property rights laws so that women may hold individual or joint land titles. This will decrease the chances of property and land grabbing by other relatives. There is a need to ensure female property and inheritance rights as this would help empower women and rectify a fundamental injustice. Therefore, the government should design strategies to address these issues through advocacy and awareness programs to change community practices and attitudes. Women need to be aware of their rights in order to claim them. Awareness is not only required for rights holders, but in many instances, other actors and stakeholders including policy makers, land professionals, magistrates and judges who need the knowledge and capacity to interpret and implement national laws with respect to equal inheritance rights.

Improving Access to Credit

Land reform without farm credit will achieve little in terms of redistribution for justice and efficiency. Access to credit and other rural finance services should be improved to strengthen women's potential to purchase key inputs, property and other assets needed for agricultural production. The study noticed that women lack access to credit to boost their agricultural investments. This is particularly due to the fact that most rural women do not own property that can serve as collateral, and major financing institutions, especially banks, are afraid of losing large amounts of money in unpaid debts (World Bank, 2007). Conversely, those who do own assets that serve as collateral are unforthcoming to put assets at risk as collateral when they are vital to their livelihoods. Therefore, there is a need to provide micro-financial services which will provide access to credit for rural women who do not have the collateral. Credit delivery can be improved by setting up micro-finance institutions in rural areas and reorienting the banking system to cater to the needs of women.

Measures should be undertaken by the government to assist commercial banks in reducing their stringent lending criteria in order to accommodate women farmers. The criteria should focus on the viability of the project being financed and not strictly on the ability of women to pledge collateral. Viability-based lending is common in developed countries and can create access for rural women to financial resources. The banks should also be willing to offer lower interest rates or interest-free loans, which may be obtained without the requirement for collateral security. Policy initiatives for gender equitable finance cannot be limited to rural microcredit, but must involve the development of more inclusive and women-friendly formal financial system and vital complementary supporting services. However, credit facilities should be accompanied by human development training and agricultural technical skills both for men and women to enable them to receive and utilize full benefit from the loans. Both men and women must be familiarized with the principles of business economics and record keeping, and they should become proficient in farm management.

Conclusion

Land reform in Zimbabwe was an inevitable and necessary undertaking whose major aim was to redress the historical injustices that resulted following colonialism. The struggle for equality over access and control of land was largely driven by the need to redress racial imbalances whilst overlooking other class disparities that emanated from gender perspectives. This has led to the negation of women's concerns in relation to their access and control of land. The study agrees that the FTLRP was a noble cause, but it did not ensure democratic outcomes for women. It is apparent that the program was short-sighted and driven by other factors such as political expediency, and thus could not fully address women’s concerns for land ownership and control. It is plausible to conclude that overall, the FTLRP diminished the opportunities or spaces for women to be empowered, and reduced the democratic spaces for genuine participation of women in the agriculture development processes by denying them rights to land, widening gender inequalities, and ultimately exacerbating their poverty. The situation of women has been worsened by a lack of credit facilities and a weak government agricultural support mechanism. It is important to note that understanding the gaps in terms of gender in the FTLRP is a crucial step in any reconstitution of future land reform policies that may be done in Zimbabwe. However, any land reform policy measures that might be taken in Zimbabwe should be guided by a new constitution that serve and protects women’s rights to land and property.

References

Babbie, E., Mouton, J., Vorster, P., & Prozesky, B. (Eds.). (2001). *The practice of social research.* Cape Town: Oxford University Press.

Goetz, A. M. (1997). *Getting institutions right for women in development*. New York: Zed Books.

Grown, C., & Gupta, G.R. (2005). UN millennium project task force on education and gender equality. *Earthscan*. New York: Taylor & Francis

Mann, M. (2000). Women's access to land in the former Bantustans: Constitutional conflict, customary law, democratisation and the role of the State. In *Land reform agrarian change in Southern Africa*, Occasional Paper Series, Programme for Land and Agrarian Studies, University of the Western Cape.

Moser, C. (1993). *Gender planning and development: Theory, practise and Training*. London: Routledge.

Mouton, J. (2001). *How to succeed in your master's and doctoral studies*. Pretoria: VanSchaik Publishers.

Mpahlo, R. (2003). Women and the land reform programme in Zimbabwe. *Institute of Development Studies, Agrarian Reform and Development Project* (pp 6-15).

Mgugu, A. (2008). Women's land and economic rights in Zimbabwe: Gender audit report. *Women Land and Water Rights in Southern Africa* (WLWRSA). Harare, Zimbabwe.

The Center for Reproductive Rights. (ed.). (2004). Women of the world: Laws and policies affecting their reproductive lives: South Asia. *Arrows for Change, 10*(2), 9.

Wiggins, S. (2003). Lessons from the current food crises in Southern Africa: Report on SARP/CARE/IFAS meeting, No.3. Johannesburg HSRC/SARPN (pp. 23-34).

Women and Land in Zimbabwe. (2008). *Women's Harvest, 2*(1)

World Bank. (2007). World development report 2008: Agriculture for development. Washington, DC: World Bank.

A Brief History of Tsetse Control Methods in Zimbabwe and Possible Effects of Climate Change on Their Distribution

Rory Pilossof, University of the Free State, South Africa

Abstract

African trypanosomiasis, which affects wildlife, domesticated animals and humans, remains widespread across Africa. Approximately 8 million km^2, covering 37 African counties, are infested with tsetse flies (*Glossina*) that carry the disease (Allsopp 2001). The first part of this paper looks at the history of tsetse control on the northern fly-belt in Zimbabwe, affecting the Mashonaland East, Mashonaland Central and Mashonaland West provinces. In Zimbabwe, tsetse control has shifted and evolved in the twentieth century, ranging from the initial methods of game destruction and bush-clearing, to ground and aerial spraying of insecticides, the sterile insect technique (SIT), tsetse trapping, and the use of insecticides applied to cattle or to artificial baits called targets. The second part of the paper looks at the possible effect of climate change on the abundance and distribution of tsetse by considering how changes in temperature could affect life cycles and breeding patterns. The analysis offers suggestions for the means of alleviating the future effects of any alteration in human-tsetse contact resulting from changes in climate, land use and human populations.

Introduction

African trypanosomiasis, which affects wildlife, domesticated animals and humans, remains widespread across Africa. Approximately 8 million km^2, covering 37 African counties, are infested with tsetse flies (*Glossina*) that carry the disease (Allsopp, 2001). The World Health Organisation (WHO) estimates that up to 70 million people, as well as 50 million cattle, currently live with the risk of exposure (WHO, 2010). The potential economic loss from the disease amounts to US$4.75 billion a year, indicating the developmental benefits from controlling the disease and the vectors (Scoones, 2014). In reaction to these figures, WHO initiated new control and surveillance programs. From 2000 to 2009, 30 countries received WHO support and the number of reported cases of human African trypanosomiasis (HAT) fell from over 37,000 in 1998 to under 10,000 in 2009 (Simarro et al., 2011). These results have raised hopes for the control and elimination of HAT.

In addition to HAT, animal Africa trypanosomiasis (AAT) persists across the continent (Messina et al., 2012). The disease is economically debilitating and is estimated to reduce livestock productivity by 20-40 per cent in tsetse-infested areas (Hursey, 2001). AAT presents a problem to many communities and people in Africa. The threat of climate change, which may alter patterns of tsetse distribution, raises concerns for many pastoralists and commercial livestock operations on the continent (Messina et al., 2012).

This paper begins by tracing the history of tsetse control on the northern fly-belt in Zimbabwe, which attracts the Mashonaland East, Mashonaland Central and Mashonaland West provinces. It is commonly agreed that, as a consequence of the very low birth rate of tsetse of all species, the most effective approach to the control of human and animal trypanosomiasis lies in the control of the vector (Hargrove, 2003). In Zimbabwe, tsetse control shifted and evolved in the twentieth century, ranging from the initial methods of game destruction and bush-clearing to ground and aerial spraying of insecticides, the sterile insect technique (SIT), tsetse trapping, and the use of insecticide applied to cattle or to artificial baits called targets. The second part of the paper looks at the possible effect of climate change on the abundance and distribution of tsetse by considering how changes in temperature and vegetation patterns could affect life cycles and breeding patterns. The analysis offers suggestions for the means of alleviating the future effects of any alteration in human-tsetse contact resulting from changes in climate, land use and human populations.

The History of Tsetse Control Methods in Zimbabwe

A range of methods has been used in Zimbabwe and Rhodesia since 1900 to combat tsetse flies and the spread of trypanosomiasis. The most prominent have been game destruction and bush clearing, aerial and ground spraying, baited and insecticide treated target, and insecticide treated cattle.

Game Destruction and Bush Clearing

Game destruction and bush clearing were the first large-scale programs put into place to eradicate tsetse fly in Rhodesia. The rinderpest outbreak of 1896-97 vastly reduced game and cattle populations across southern Africa, and tsetse disappeared with them. However, as the game numbers recovered, so did the tsetse, and with them, the number of cases of trypanosomiasis. This recovery coincided with the expansion of African and European livestock numbers, which in many cases had expanded into areas that had been free from tsetse due to the rinderpest epizootic (Gargallo, 2009). The Agriculture and Veterinary Department was emphatic in its early assessment of the disease. It felt the fly was a "serious danger to domestic animals, and the extermination of big game in the infected areas is the only means of getting rid of this pest" (Gargallo, 2009, p. 741). Over the next several decades, "in the tsetse fly eradication campaigns, close to a million animals were … slaughtered in order to create buffer zones between resistant game and European land or farms" (Mutwira, 1989, p. 250). Game destruction was officially adopted by the government in 1933 (Chadenga, 1992). While the eradication campaigns were extensive, and often successful in many areas (Ford, 1971), they raised opposition from Africans and Europeans. Conservationist movements such as the Society for Game Preservation and the Natural Resources Board raised considerable objections. So too did the Hunters Association and others affiliated with the hunting lobby. In addition, as White (1995) has shown, the system was riddled with abuse and open to exploitation. By the 1950s, wholesale game eradication fell away as official policy and was replaced by other less contentious methods. The game destruction was not cheap either. The cost of hiring hunters and assistants to travel to remote areas was high, and the impact in areas was hard to verify (Gargallo, 2009; Ford, 1971).

Bush clearing was another tactic employed to try to control the fly's presence. From 1955-1960, bush clearing aimed at denying refuge sites to tsetse flies was thought to be an effective measure to control the fly (Ford, 1971; Chadenga, 1992). However, such programs were never particularly effective, were hard to maintain, and also engendered opposition from conservationists.

Aerial and Ground Spraying

The advent of insecticidal methods of controlling and eliminating tsetse flies changed the face of trypanosomiasis control in the 1950s and 1960s. Across Africa, "well organized trypanosomiasis control organizations showed it was possible to move from defense to attack in the battle against tsetse" (Barrett, 1991). In Zimbabwe, tsetse control officers adopted applied ground spraying techniques that had been used in other parts of the continent. Initially the spraying was done using dieldrin and switched to the cheaper DDT after a few years. It was used across the country to great effect (Lovemore, 1999). Ground-spraying worked on the basis that tsetse flies spend much of their life "resting in cool, shady places provided by trees [and] holes … and directing a persistent insecticide at these sites should achieve a good control measure" (Chadenga, 1992). Reports by Cockbill (1967) and Robertson and Kluge (1968) indicated positive results from large programs employing this tactic in the south-east districts of Zimbabwe, as well as in joint operations with South Africa and Mozambique.

Aerial spraying was first tried in Zimbabwe in the 1950s. However, it was initially very costly. In the 1960s, it became cheaper and was used more widely. Sequential, ultra low volumes of insecticide (in Zimbabwe, this was mostly *endosulfan* at 20-24 g/ha.) were used to target large areas of tsetse-infested regions. Hursey and Allsopp (1983) have demonstrated that the technique was feasible and produced quick results for dealing with emergency situations. During the height of the liberation war (1976-1979), tsetse control measures ceased in many parts of the country. As a result, the northern fly-belt expanded as tsetse reinvaded Zimbabwe from Mozambique and affected a large number of farming and communal areas. The densities of these fly populations were exceptional (Lovemore, 1999), and Zimbabwe joined the Regional Tsetse and Trypanosomiasis Control Program (RTTCP) after independence to combat the spread of the flies. Both ground and aerial spraying were used on a large scale in this operation with considerable results. The fly-belt was pushed back to its 1975 limits by the end of the 1980s (Lovemore, 1999: 27).

However, both aerial and ground spraying techniques have several disadvantages. With ground spraying alone, "it is difficult to consolidate areas that are cleared of tsetse flies, and this means that repeat spray applications are inevitable. This becomes expensive, as well as being a cause for environmental concern. In addition, ground spraying places heavy demands on transport, labour and strict operational supervision" (Chadenga, 1992). Due to these considerations, the Tsetse and Typanosomiasis Control Branch of Zimbabwe reduced the use of DDT in its control operations. Aerial spraying also faces challenges. It is particularly ineffective and dangerous in hilly terrain, and the operations are dependent on a high level of technical sophistication and the need for efficient and timely repeat sprayings. Both forms of spaying are also relatively expensive to undertake (see Table 1).

Table 1

Summary of Costs of Different Approaches to Tsetse Control in Zimbabwe 1990

Case A: Flat terrain with relatively easy access

Method	Direct Costs Z$/km^2	Indirect Costs Z$/km^2	Total Costs Z$/km^2
1) Aerial spraying with endosulphan	900	250 – 500	1150–1400
2) Ground spraying with DDT	400	50 – 90	450–490
3) Targets at 1 per sq. km.	120	50 – 90	170 – 210
4) Targets at 4 per sq. km.	400	50 – 90	450–490
Cattle Decatix dipping	60	These are insecticide costs only (1990)	
Spot on application	165	(at 10 head of cattle per square kilometre)	

Case B: Rugged terrain with difficult access

Method	Direct Costs Z$/km^2	Indirect Costs Z$/km^2	Total Costs Z$/km^2
1) Ground spraying with DDT	470	200–350	670–820
2) Targets at 1 per sq. km.	170	250–400	420 – 570
3) Targets at 4 per sq. km.	500	250–400	750–900
4) Ground spraying with deltamethrin	950	200–350	1150–1300

Source: Chadenga, 1992.

In Botswana, aerial spraying has been used to great effect and has resulted in tsetse being eradicated in that country. The particular improvement in the efficacy of aerial spraying in Botswana resulted from the use of effective GPS systems, which allowed highly specific and targeted spraying (Kgori et al., 2006), combined with operations over much larger areas. Similar techniques are likely to be used in Angola, Namibia and Zambia, where the generally flat terrain is more suited to this form of control and eradication.

Odor Baited and Insecticide Treated Targets

It has been shown that the low reproductive rates of tsetse mean that the kill rate needs only to be relatively low in order to have a major control effect (Hargrove, Torr, & Kindness, 2003). This can be achieved with targets. The first trial of odor baited targets in Zimbabwe was undertaken on an island of 5 km^2 in Lake Kariba (Vale et al., 1986). This was swiftly followed by a larger trial of 600 km^2 in the Zambezi Valley (Vale et al., 1988). The aim was to control tsetse flies by attracting them to visual targets, which are baited with odor attractants and coated with insecticide. The trials indicated that the method could work for large-scale campaigns and offered a number of advantages over other methods of control. The targets were relatively cheap, non-intrusive and environmentally friendly, and could work both in flat or rugged terrain. A major benefit of the targets is that they limit reinvasion of cleared areas. Targets were deployed at four per square kilometer throughout much of the northern fly-belt region as part of the RTTCP activities, and were highly effective in the Umfurudzi wilderness area and areas south of Lake Kariba (Chadenga, 1992). By 1990, 54,000 targets were deployed across Zimbabwe. Table 1 shows the cost per km^2 of the odor baited targets in 1990.

Since 1990, tsetse control technologies and methods have continued to evolve. However, across many parts of Africa, Zimbabwe included, the economic downturn and the limitations of structural adjustment programs have reduced the funds available to continue research (Scoones, 2014). Recent innovations in research have led to the development of insecticide treated screens (or tiny targets) to control flies more cost-effectively. Shaw et al. (2015) have reviewed a 250 km^2 field trial of tiny targets in Northern Uganda. They estimated that the cost of the operation at US$85.4/km^2, which represents a "major reduction in the cost of tsetse control." The low cost per km^2 is largely due to the low costs of tiny targets and to the ease with which they can be deployed.

Insecticide-Treated Cattle

The application of insecticides directly to cattle was re-instated in the 1980s and 1990s. While the technique had been used since the 1940s, improvements in chemicals and application techniques, as well as improved understanding of fly behavior, have seen this approach yield impressive results (Hargrove et al., 2012; Torr et al., 2011; Torr et al., 2007; Hargrove et al., 2003). The insecticide can be either be applied as a dip spray or as a pour-on formulation. The pour-on approach, applied monthly, is less error prone, and has been proven more flexible and adaptable in more remote regions, while allowing herders to adapt the approach as necessary (Swallow et al., 1995). However, this pour on method is relatively costly. The lower cost of the dip spray, and the ability to combine it with tick control, makes this a very cost-effective measure to curb AAT (Chadenga, 1992).

Despite these various control measures, neither tsetse nor trypanosomiasis have been eradicated in northern Zimbabwe. Recently, there was a spate of new cases of HAT in northern Zimbabwe, and a number of new programs and initiatives are underway to address this issue (Scoones, 2016). With the radical changes in rural livelihoods and settlement patterns that have occurred in Zimbabwe since the start of the fast-track land reform program in 2000, "it is still unclear how the reconfigured land use and occupation structures have changed exposures to trypanosomiasis" (Dzingirai et al., 2013). In addition, the potential long-term affects of climate change have also been unclear. Changes in climate could dramatically impact the fly belts, either enlarging or reducing them, depending on the changes that take place, and how these affect tsetse population growth rates and habitations.

Current Fly Infested Areas in Northern Zimbabwe

Tsetse still occupy the lowveld areas of the Zambezi valley along the border with Zambia and Mozambique. Despite the range of interventions in Zimbabwe over the past 30-40 years, conditions in the lowveld, plus the continued reinvasion of flies from Zambia and Mozambique, mean that the fly still has a foothold in the region. In addition, it has been noted that shifts in vegetation patterns have resulted in the fragmentation of tsetse habitat (Scoones, 2014). As a result, particular patches of habitat exist, beyond the escarpment and in the interior of Zimbabwe, that can and do host small fly populations that reside closer to more populated areas. Human interactions with these pockets of fly-holding vegetation have increased due to events in Zimbabwe over the last two decades. As grazing areas have been depleted, herders have moved further onto the edges of wildlife areas. Food and water shortages have pushed people to forage closer to these infested zones, and land reallocation has put people in areas that were not previously occupied. All of this has contributed to increased exposure and could explain the increased HAT cases. Vale (1988) has pointed out that while these pockets of vegetation contain flies all year-round, they might also be supplemented by seasonal movement of flies from lower areas. They probably do not reproduce in these areas, but migrate when conditions are right and 'repopulate' these zones at certain times rather than permanently occupy them (Jack, 1939). Nevertheless, these fly populations present significant risks to the human and cattle populations around them.

Climate Change in Northern Zimbabwe: Possible Scenarios and Effects on Fly Populations

Since 1900, much of southern Africa has progressively experienced warmer temperatures. Sango and Godwell (2015) have pointed to a historic trend that in the Makonde district (in Mashonaland West and close to the tsetse zones of northern Zimbabwe). Using data from the meteorological services in Zimbabwe, they found that the mean average annual temperature has increased over 0.5 degrees Celsius from 1962 to 2008. Some have posited that the fly belts will expand due to climate change and global warming (Dzingirai et al., 2013). It is recognized that there are a variety of factors that affect the tsetse distribution, including temperature, rainfall, humidity, vegetation and food sources, as will be discussed below. However, the rise in average temperatures may have two important impacts on the tsetse fly distribution:

1. It may make the Lowveld more inhospitable to flies and directly impact breeding patterns and survival rates. Despite the continued presence of the tsetse in northern Zimbabwe, the overall fly population seems to have fallen. Hargrove and Ackley (2015) have illustrated that after the droughts and heat waves of 1992 and 1994/1995, catches of adult flies dropped markedly, indicating a drop in the total fly population. In 1992 between 16 October and 4 November, the lowest daily maximum temperature was 38 degrees Celsius, and the average maximum temperature was 40.2 degrees Celsius. The catches of fly numbers increased during 1993, but then in November of 1994 and October 1995, the mean maximum temperatures were 37.8 degrees Celsius and 38.1 degrees Celsius respectively (Hargrove and Ackley, 2015). These heat waves, so close together, have had an impact on the total fly numbers in the Zambezi Valley in two main ways. First, the high temperatures themselves killed flies, particularly teneral flies, unable to survive in these temperatures. Second, these

heat waves also coincided with the lowest recorded rainfall in the area. As a result, fly numbers suffered not only from the effects of temperature, but in the view of Hargrove, also because of a decline in the number of mammalian hosts, which also died in large numbers due to the drought (Hargrove, 2003).

2. The rise in temperatures may make the Highveld areas currently unoccupied by flies more hospitable to fly invasion. Low winter temperatures on the Highveld have inhibited fly survival there. However, if these temperatures rise, so too do the chances of fly survival and reinvasion (Pollack, 1992).

As stated, there is a range of complicated modelling necessary to conclusively determine if the tsetse with flourish or flounder in northern Zimbabwe due to effects of climate change. Much of the data needed to undertake this modelling is not available. However, given what is known currently about the tsetse, it seems at least likely that there is a possibility of an increase in fly populations. If this were to occur over the next several decades, what would be the implications? This is the focus of the rest of the paper.

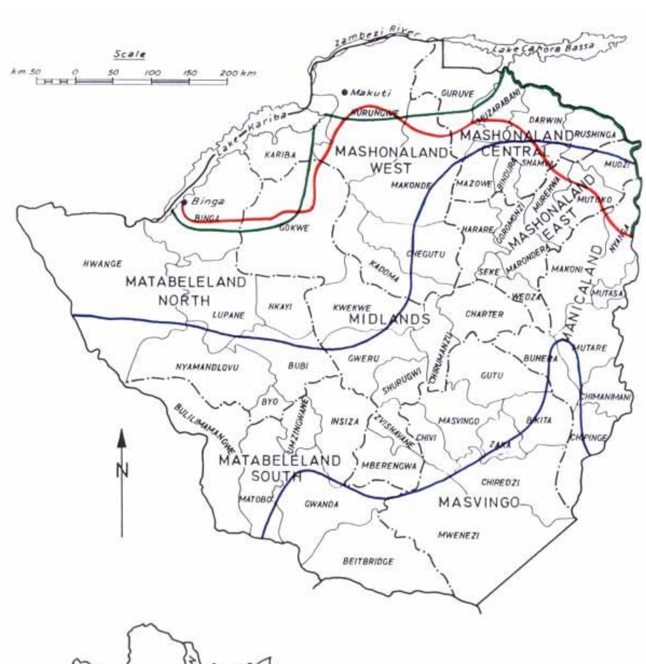

Figure 1. Extent of the Tsetse Reinvasion in Zimbabwe in 1983 (Lovemore, 1994)

Desmond Lovemore (1999) illustrated the historic extent of the fly belts in northern Zimbabwe, and how these have shifted over time. Successful control measures such as host eradication, bush clearing and spraying pushed flies back from the 1896 extent (the blue line in the Map. However, the halt to control measures due to the Liberation War in the late 1970s saw the flies reinvade previously cleared areas, particularly in the north-east section of the country.

The obvious threat here is that without continued protection measures, and the possible influence of climate change, tsetse could reinvade much of northern Zimbabwe, which would cause fly related problems for much of Matabeleland North, the Midlands, Mashonaland West and Mashonaland Central.

As Cockbill (1982) warned:

> In Zimbabwe, where agriculture and particularly stock raising are of major economic importance, the control of the tsetse fly, leading to its total eradication is a task of national importance. If control measures were suspended or became ineffective, tsetse could again spread to its ecological limits and occupy about half of Zimbabwe as they did before 1896. If this were to happen, about a third of the national herd would be threatened with disaster. Capital losses would involve not only animals, but also the cost of buildings, dairies, dips, crushes and fences ancillary to livestock production. Rural society would suffer large-scale cattle losses. (Lovemore, 1984)

Table 2

Population per District (thousands)

MATABELELAND NORTH	
Victoria Falls	34
Hwange	38
Binga	140
Lupane	100
Nkayi	109
MIDLANDS	
Gokwe North	240
Gokwe South	305
Kwekwe	175
MASHONALAND WEST	
Kariba	41
Hurungwe	329
Makonde	154
Sanyati	113
Chinhoyi	78
MASHONALAND CENTRAL	
Mbire	82
Guruve	124
Muzarabani	123
Mount Darwin	213
Rushinga	74
MASHONALAND EAST	
UMP	113
Mudzi	133
Mtoko	148
TOTAL	2866

As per the findings of the 2012 population census, if the fly belt extended to the pre-1900 extent, the number of people effected would be in excess of 2.8 million people. (See Table 2).

This is a significant population that would have to contend with the associated risks of living in tsetse infested areas. In addition to the human population, many of these areas have large cattle populations. The northern parts of Mashonaland have traditionally been areas well stocked with cattle. However, exact numbers are hard to ascertain. According to the Comercial Farmer's Unit (CFU), the total national herd was estimated at 5.5 million in 2016 with 90 per cent of this in smallholder farming areas, but numbers have been declining due to the current drought. It may be up to one third of the national herd in this region, meaning 1.8 million cattle would be at risk from AAT (Lovemore, 1999). As Cockbill (1982) has noted, the resulting influx of flies would result in capital losses of livestock and a large negative impact on rural livelihoods.

However, since 2000 there have been a number of social, environmental and economic changes in northern Zimbabwe, which could temper possible fly invasions. Since the implementation of the fast-track land reform program in 2000, the commercial farming sector has all but been eradicated, replaced largely with small-scale farming. The result has been an increased spread of human populations, as land previously reserved for commercial use (cropping, ranching, game reserves, etc.) has now been settled by small-scale farmers from urban and communal areas. These new forms of settlement have resulted in more land being cleared for farming, e.g. diminishing vegetative covers tsetse flies can use. The growth in contract tobacco farming and the significant rise in small-scale tobacco farmers have put huge pressure on environmental resources. In 1999, there were fewer than 5,000 communal or small-scale tobacco farmers. This increased to over 90,000 in 2013 and then to 130,000 in 2015. These farmers have mostly relied on firewood to cure their tobacco. At the end of 2013, it was estimated that 300,000 square kilometres of tree cover was being lost a year due to tobacco farming in Zimbabwe. While this is taking place across the country, the northern regions of Mashonaland are prime tobacco areas, so much of this deforestation is taking place in areas to which flies might occupy. Since 2000, the rise in settlers and human populations has had adverse affects on the wildlife populations, due to poaching, resource extraction and loss of habitat (Rademeyer, 2016). This means that vegetation cover has been lost as well as a range of animal hosts for tsetse. However, to temper this loss of wildlife, many small-scale farmers have livestock, such as cattle, that the flies can feed on.

As noted above, there is evidence that patches of habitat exist beyond the escarpment and in the interior of Zimbabwe that can and do host small fly populations that reside closer to more populated areas (Scoones, 2014). These pockets, closer to human activity, threaten cattle and human health. With the possible effects of climate change these pockets could be important areas that allow the flies to gain a foothold in the Highveld.

Control and Policy Issues

If increasing temperatures were to make the Highveld more hospitable to tsetse leading to possible reinvasion and an increase in fly numbers, methods for controlling flies would have to adapt accordingly. These invasions may pose significant threats to human and livestock populations, particularly because of people's reliance on livestock and the importance of the rural economy. Shaw et al. (2014) have shown in a detailed study of Ethiopia, Kenya, Somalia, Sudan and Uganda that the mean benefit over a 20-year period, since the absence of AAT is approximately US $3,335 per square kilometer. These countries, and the cattle production systems practiced there, are very different to the Zimbabwean context. However, the study illustrates the potential importance of continued tsetse control in northern Zimbabwe.

Understanding the drivers of this possible reinvasion (as outlined above) and conditions on the ground reveal what the best control measures would be. For example, considering that the flies will rely mostly on scattered vegetative outcrops to survive, strategic placement of baited traps in corridors of fly travel/migration, as well as around these vegetation outcrops could yield significant results and keep flies in check. In addition to baited traps, if there was a concerted effort to ensure that livestock of those in proximity to these outcrop areas were insecticide treated, controlling the spread of these new populations of flies could be relatively easy.

Shaw et al. (2013) have estimated the costs of various tsetse control measures in Uganda. For the creation of fly free zones, the field costs per square kilometer were US $283 for baited traps (4 traps per square kilometer), US $30 for insecticide treated cattle (ITC - 5 cattle per square kilometer), US $380 for sequential aerosol technique (SAT) and US $993-1,365 for sterile insect techniques (SIT). For areas where continuous tsetse control operations were necessary, Shaw et al. estimated the costs for a 20-year period, and put the costs at US $368 for ITC, US $2114 for traps (all deployed continuously), and US $2,442 for SAT (applied at three year intervals).

These costs and estimates would not be directly transferable to the Zimbabwean context. In Zimbabwe, such costs are likely to be higher, due to the US dollar being the principal currency, higher import costs, wage demands and greater area to cover. However, what Shaw et al. (2013) illustrate is that baited traps and the ITC are the cheapest forms of control currently in use. Indeed, as Chadenga (1992) has noted, the ITC and trap costs in Zimbabwe during the 1990s were also the most cost effective means of tsetse control.

Along with these direct control measures, community outreach campaigns should be implemented to ensure that there is a significant level of community buy-in to these tsetse control measures. Whilst these activities may drive up the costs, research has illustrated that community participation in trap maintenance and cattle dipping significantly improve results (Shaw et al., 2014; Dransfield & Brightwell, 2004). Also, whilst the insecticide treated cattle will be protected from tsetse flies, there is additional benefit in guarding against other parasites and pests. Furthermore, as Scoones (2014) has observed, communities in areas with vegetative outcrops are often aware of which areas are populated with tsetse and a threat to both animals and humans. Community members can then assist with the deployment of traps and specific targeting of key areas, reducing costs and time in the field.

Of course, for these interventions to work, they would require investment and support from the state. Tsetse control operations in Zimbabwe have decreased in the last two decades due to the financial and political crises that have affected the country. However, possible climate change effects may result in tsetse and trypanosomiasis becoming much more pressing issues for many rural dwellers and livestock handlers over the next few decades.

Conclusion

This paper has traced the history of tsetse control in Zimbabwe. While tsetse flies still reside in northern Lowveld areas, many of the control measures have had a discernable impact. However, changes in the political, social and economic realities in Zimbabwe have meant that control measures have been curbed. At the same time, rising temperatures due to climate change raise the possibility that tsetse could reinvade the Highveld. This raises concerns that large populations of people and cattle will be exposed to the tsetse and the associated risks of AHT and HHT. However, as this paper has outlined, current control methods, including baited traps and treated cattle, would be efficient in controlling this possible reinvasion, if implemented properly and while these fly populations are establishing themselves. This requires government support and clear policy guidelines to ensure that control measures are enacted. The benefits to the human inhabitants and their livestock are obvious, and the potential long-term development benefits clear.

References

Allsopp, R. (2001). Options for vector control against trypanosomiasis in Africa. *Trends in Parasitology*, *17*(1), 15-19.

Barrett, J. C. (1991). The role of the economist in planning and appraisal of tsetse and trypanosomiasis control operations: Lessons from Zimbabwe. Retrieved from http://www.fao.org/docrep/004/t0599e/T0599E07.htm.

Chadenga, V. (1992) Analysis of the efficacy, practicality ad cost of various tsetse and trypanosomiasis control techniques as used in Zimbabwe. Retrieved from http://www.fao.org/docrep/004/t0599e/T0599E08.htm.

Chenje, M., & Johnson, P. (1996). *Water in Southern Africa*. Harare: SARDC.

Cockbill, G. F. (1975). *Handbook for use of tsetse field staff*. Salisbury: Tsetse and Trypanosomiasis Control Branch.

Cockbill, G. F. (1982). A report on the tsetse and trypanosomiasis situation in Zimbabwe. A xeroxed report prepared for the Commission of the European Communities, September 1982.

Dransfield, R. & Brightwell, R. (2004). Community participation in tsetse control: The principles, potential and practice. In I. Maudlin, I., P. Holmes, & M. Miles (Eds.), *The Trypanosomiases* (533–546). Wallingford: CABI Publishing

Dzingirai, V., Murwira, A. & Shereni, W. (2013). Research update: Situation analysis Zimbabwe. *Dynamic Drivers of Disease in Africa Consortium*.

Ferguson, H. M., Dornhaus, A., Beeche, A., Borgemeister, C., Gottlieb, M., Mulla, M. S., Gimnig, J. E., Fish, D., & Killeen, G. F. (2010). Ecology: A prerequisite for malaria elimination and eradication. *Public Library of Science Medicine 7*(8), e1000303.

Ford, J. (1971). *The role of trypanosomiasis in African ecology: A study of the tsetse fly problem*. Oxford: Oxford University Press.

Gargallo, E. (2009). A question of game or cattle? The fight against trypanosomiasis in Southern Rhodesia. (1989-1914). *Journal of Southern African Studies, 35*(3), 737-753.

Hargrove, J. W. (2003). *Tsetse eradication: Sufficiency, necessity and desirability*. Edinburgh: DFID Animal Health Programme.

Hargrove, J. W. & Ackley, S. (2015, March 25). Mortality estimates from ovarian age distributions of the tsetse fly *Glossina pallidipes* Austen sampled in Zimbabwe suggest the need for new analytical approaches. doi: 10.1017/S0007485315000073

Hargrove, J. W., Ouifki, R., Kajunguri, D., Vale, G. A. & Torr, S. J. (2012). Modeling the control of trypanosomiasis using trypanocides or insecticide-treated livestock. *PLoS Neglected Tropical Diseases*, *6*(5).

Hargrove, J. W., Torr, S. J. & Kindness, H. M. (2003). Insecticide-treated cattle against tsetse (*Diptera: Glossinidae*): What governs success? *Bulletin of Entomological Research, 93*(3), 203-217.

Hursey, B. S. (2001). The programme against African trypanosomiasis: Aims, objectives and achievements. *Trends in Parasitology, 17*(1), 2–3.

Hursey, B. S., & Allsopp, R. (1983). Sequential applications of low dosage aerosols from fixed wing aircraft as a means of eradicating tsetse (*Glossina spp*) from rugged terrain in Zimbabwe. Harare: Branch of Tsetse and Trypanosomiasis Control.

Jack, R. W. (1939). Studies in the physiology and behaviour of Glossina morsitans. *Memoirs of the Department of Agriculture, Southern Rhodesia*, *No. 1*.

Kgori, P. M., Modo, S. & Torr, S. J. (2006). The use of aerial spraying to eliminate tsetse from the Okavango Delta of Botswana. *Acta Tropica*, *99*(2-3), 184-199.

Laveissiere C., & Grebaut, P. (1990). The trapping of tsetse flies (*Diptera: Glossinidae*). Improvement of a model: the Vavoua trap. *Tropical Medicine and Parasitology*, *41*(2), 185-192.

Lovemore, D. F. (1999). *Final report for the Zimbabwe component of the first and second phases of the regional tsetse and trypanosomiasis Control Programme, 1986-1998*. Tsetse and Trypanosomiasis Control Branch, p. 163. Zimbabwe: Harare.

Lovemore, D. F. (1994). The influence of tsetse distributions on settlement and land utilisation in Zimbabwe with reference to the ec-funded regional tsetse and trypanosomiasis control programme (RTTCP) of Malawi, Mozambique, Zambia and Zimbabwe. In Food and Agriculture Organization of the United Nations (FAO), *A systematic approach to tsetse and trypanosomiasis control*. Retrieved from http://www.fao.org/docrep/004/T4885B/T4885B09.htm

Messina, J. P., Moore, N. J, DeVisser, M. H., McCord, P. F., & Walker, E. D. (2012). Climate change and risk projection: Dynamics spatial models of tsetse and African trypanosomiasis in Kenya. *Annals of the Association of American Geographers, 10*(25), 1038-1048.

Munemo, N. (2011). Southern Africa: Lesotho, South Africa, Swaziland, and Zimbabwe. In D. Moran (Ed.), *Climate Change and National Security: A Country-Level Analysis*, pp 233-246. Washington, D.C.: Georgetown University Press.

Mutwira, R. (1989). Southern Rhodesian wildlife policy (1890-1953): A question of condoning game slaughter?' *Journal of Southern African Studies*, *15*(2), 250-262.

National Center for Atmospheric Research (NCAR). (2005, May 24). *A continent split by climate change: New study projects drought in Southern Africa, rain in Sahel*. Boulder, CO: National Center for Atmospheric Research.

Pollock, J. N. (1982). *Ecology and behaviour of Tsetse*. Rome: FAO.

Rademeyer, J. (2016). The role of the "secret police" in Zimbabwe's deepening poaching crisis. *African Arguments*. Retrieved from http://africanarguments.org/2016/08/04/ the-role-of-the-notorious-central-intelligence-organisation-in-zimbabwes-worsening-wildlife-crisis/

Robertson, A. G., & Kluge, E. B. (1968). The use of insecticide in arresting an advance of *Glossina Morsitans Westwood* in the South-East Lowveld of Rhodesia. *Proceedings and Transactions of the Rhodesia Science Association, 53*, 17–33.

Scoones, I. (2014). The politics of trypanosomiasis control in Africa (STEPS Working Paper 57). Brighton: STEPS Centre.

Scoones, I. (2016, May 18). Land, politics and tsetse flies: Changing disease landscapes in Zimbabwe. *The Zimbabwean*. Retrieved from http://www.thezimbabwean.co/ 2016/04/ land-politics-and-tsetse-flies-changing-disease-landscapes-in-zimbabwe/

Shaw, A. P. M. (2009). Assessing the economics of animal trypanosomiasis in Africa: History and current perspectives. *Onderstepoort Journal of Veterinary Research, 76*, 27-32.

Shaw, A. P. M., Tirados, I., Mangwiro, C. T. N., Esterhuizen, J., Lehane, M. J., Torr, S. J., & Kovacic, V. (2015). Costs of using 'tiny targets' to control *Glossina Fuscipes Fuscipes*: A vector of Gambiense sleeping sickness in Arua District of Uganda. *PLoS Negl Trop Dis., 9*(3):e0003624. doi: 10.1371/journal.pntd.0003624.

Shaw, A. P., Torr, S. J., Waiswa, C., Cecchi, G., Wint, G. R. W., Mattioli, R. C., & Robinson, T. P., (2013). Estimating the costs of tsetse control options: An example for Uganda. *Preventative Veterinary Medicine, 110*: 290-303.

Shaw, A. P., Waiswa, C., Cecchi, G., Wint, G. R. W., Mattioli, R. C., & Robinson, T. P. (2014). Mapping the economic benefits to livestock keepers from intervening against bovine trypanosomiasis in Eastern Africa. *Preventative Veterinary Medicine, 113,* 197-210.

Simarro, P. P., Cecchi, G., Paone, M., Franco, J. R., Diarra, A., Ruiz, J. A., F`evre, E. M. Courtin, F., Mattioli, R. C., & Jannin, J. G. (2010). The atlas of human African typanosomiasis: A contribution to global mapping of neglected tropical diseases. *International Journal of Health Geographics, 9*, 57.

Tanser, F.C., Sharp, B., & le Sueur, D. (2003). Potential effects of climate change on malaria transmission in Africa.' *Lancet, 362*, 1792–1798.

Torr, S. J., Hargrove, J. W. & Vale, G. A. (2005). Towards a rational policy for dealing with tsetse. *Trends in Parasitology, 21*(11), 537–41.

Torr, S. J., Maudlin, I. & Vale, G. A. (2007). Less is more: Restricted application of insecticide to cattle to improve the cost and efficacy of tsetse control. *Medical and* Veterinary *Entomology*, *21*(1), 53–64.

Torr, S. J., Mangwiro, T. N. C. & Hall, D. R. (2011). Shoo fly, don't bother me! Efficacy of traditional methods of protecting cattle from tsetse. *Medical and Veterinary Entomology*, *25*(2), 192-201.

Vale, G. A., Lovemore, D. F., Flint, S. & Cockbill, G. F. (1988). Odour baited targets to control tsetse flies in Zimbabwe. *Bull ent. Res*., *78*, 31-49.

White, L. (1995). Tsetse visions: Narratives of blood and bugs in colonial Northern Rhodesia, 1931-39. *Journal of African History*, *36*(2), 219-245.

World Health Organization (WHO). (2010). African trypanosomiasis (Sleeping Sickness). Retrieved from http://www.who.int/mediacentre/factsheets/fs259/en/

A Brief Note from the IJAD Editorial Management Team

International Journal of African Development is an open access interdisciplinary journal on issues related to sustainable development in Africa that was begun 2013. The first issues feature selected papers from previous international conferences on African development. We are soliciting manuscripts for future issues throughout the year. Contributing authors are advised to prepare their manuscripts using APA format to be considered for review and before they can be accepted.

Please submit your contributions online at http://scholarworks.wmich.edu/ijad/

International Journal of African Development

IJAD

Western Michigan University
College of Arts and Sciences
Department of Economics