

Malawi: A Development Puzzle?

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Abstract

This article focuses on the various dimensions of poverty in Malawi. It reviews Malawi's progress in terms of income poverty and human development. It illustrates Malawi's puzzling performance of failing to raise its people's income over most of the last 30 years but making considerable progress in terms of improving non-income human development. It analyzes some of the sources for this discrepancy between GDP growth and human development by looking at the access to safe water and sanitation, corruption and protectionism.

I. Introduction

Located in southern central Africa lies Malawi (once known as Nyasaland), a nation of currently about 15.3 million people. With a total area of approximately 110,000 square kilometers, Malawi is divided into four-fifths of land and one fifth of water. With a purchasing power parity (PPP) adjusted GDP per capita of only \$794 in 2009, Malawi is one of the poorest countries in the world. Attracting very little of the worlds media, Malawi continues to strive in order to imprint itself on the world map. Despite being small in terms of population and land area, the nation is privileged to be vibrant, exotic, and zestful. Distant from the lavish lifestyles in the concrete jungles of the west, Malawi boasts exhilarating mountain top views, immaculate golden sandy beaches, and companionable people, thus its name "the Warm Heart of Africa". Much of Malawi is undeveloped and therefore most natural features remain untouched.

Despite the astonishing beauty and tranquilizing nature, the people of Malawi suffer from low standards of living. Ever since gaining independence on the 6th of July 1964 from Britain, Malawi has been a peaceful and democratic nation. Only recently has the current President of Malawi, Mr. Bingu wa Mutharika, been accused of violating human rights and exercising autocratic leadership.¹

Influenced by the Middle Eastern wave of protests, Malawians have launched their own version of protests to dispossess the current president. Deflated export sales, lack of foreign currency,

¹ President Bingu wa Mutharika died on April 5, 2012 of a heart attack at the age of 78 (which was after the writing of this article had been completed).

prevailing poverty, rising commodity prices and misappropriation of resources by the government synthesizes the reasons for such an upheaval. The economic woes have created uncertainty and volatility in the Malawian economy, which has depressed confidence levels throughout.

Moreover, being heavily dependent on the agricultural sector, Malawi fails to reduce its reliance on loans and grants given by various international development institutions and industrialized countries. The resources provided help facilitate the poor with basic needs, education and infrastructure. Although monetary resources are frequently being injected into the Malawian economy, how has this process aided Malawi towards fighting poverty?

This article reviews Malawi's progress with regards to reducing poverty. Using data since the 1980s, a variety of indicators pertaining to economic growth and social development will be analyzed. The article is structured as follows. Following this introduction, the next section provides a brief review of the literature. Section III reviews Malawi's puzzling discrepancy in terms of making very little progress in terms of GDP per capita and GDP growth while outperforming the average of Sub-Saharan Africa (SSF, i.e., including all income levels) in terms of various social indicators like life expectancy and infant mortality. Section IV analyzes then some possible explanations for this development puzzle before Section V provides some conclusions.

II. Literature Review

Given that Malawi is one of the poorest countries in the world, several studies have been conducted by analysts who seek to investigate the root causes of poverty in Malawi, particularly in rural areas. Although many of the studies have focused on looking at criteria that stand as potential actors in alleviating poverty in Malawi, there also are various research analysts referring to obstructive agents hindering prospects of the rural poor in Malawi. The following paragraphs summarize some of the more prominent literature.

The End of Poverty: Economic Possibilities of Our Time, written by Jeffery Sachs (2005), is an award winning book which offers a set of solutions to developing countries tangled and woven in economic, political, environmental and social problems. One chapter in the book focuses on Malawi. Sachs (2005, p. xvi) outlines clearly the effect of the 2005 drought that devastated the lives of many across Malawi: "In August 2005, my wife and I returned to villages of Ntandire and Chilota in Malawi that we had visited in 2002. Once again these villages were throes of drought and extreme hunger. One of the young children and a young man we had met in 2002 [.....] were now dead, just three years later." While the 2005 drought was clearly the root cause, Sachs (2005) makes clear that a fairly trimmed down funding was the main cause for the perfect storm in Malawi, it was a death warrant given to Malawi by the international community.

Another very prominent study is Malawi's Poverty Reduction Strategy Paper (PRSP), formally entitled *Malawi Growth and Development Strategy: From Poverty to Prosperity 2006-2011*. This document of the Government of Malawi (2006) seeks to provide an in-depth analysis of poverty in Malawi and the necessary policy interventions to move towards prosperity.

Ellis, Kutengule and Nyasulu (2003) provide a critical viewpoint of Malawi's previous PRSP and Malawi's decentralization strategy, based in micro level investigations of rural livelihoods. Their research finds that poor rural farmers are not only obstructed in increasing productivity and welfare by poverty but that Malawi's decentralization strategy has made the situation worse by bestowing power to local assemblies, which opened doors all sorts of misappropriations, including through various means of corruption.

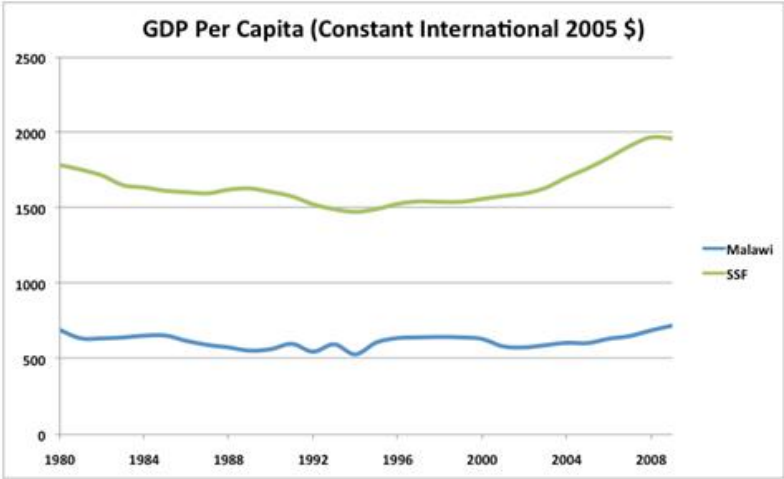
In an equally compelling paper, Peters (2006) provides a chronological view of rural income and poverty in Malawi since the 1980s. Part of the debate focuses on the International Monetary Fund (IMF) and World Bank's structural adjustment loans that hindered the prospect for farmers in rural areas to succeed after Malawi gained independence. However, 1994 onwards, Malawi and the World Bank in collaboration adopted alternative strategies that led to increases in economic growth. However, as every year passed by, corruption and neglect of smallholder farmers led to a decline in economic growth in Malawi.

III. Empirical Background

III.1. Malawi's Economic Performance

As shown in Figure 1, GDP per capita in constant 2005 international dollar, experiences a rather disappointing trend for Malawi compared to that of the whole Sub Saharan Africa region (SSF), which is not much better but at least shows more significant improvements in the last ten years. In 1980, the average income per Malawian stood at just above \$600. In 2009, we find that Malawi's per capita GDP only increased to just above \$700. The region's GDP per capita has always been above that of Malawi and the gap between Malawi and the region has become bigger and bigger. While Malawi's GDP per capita was 38.7 percent of the region's GDP per capita in 1980, by 2009, Malawi's GDP per capita was 36.7 percent of the region's GDP per capita.

Figure 1: GDP per Capita (in constant 2005 international \$), Malawi vs. SSF

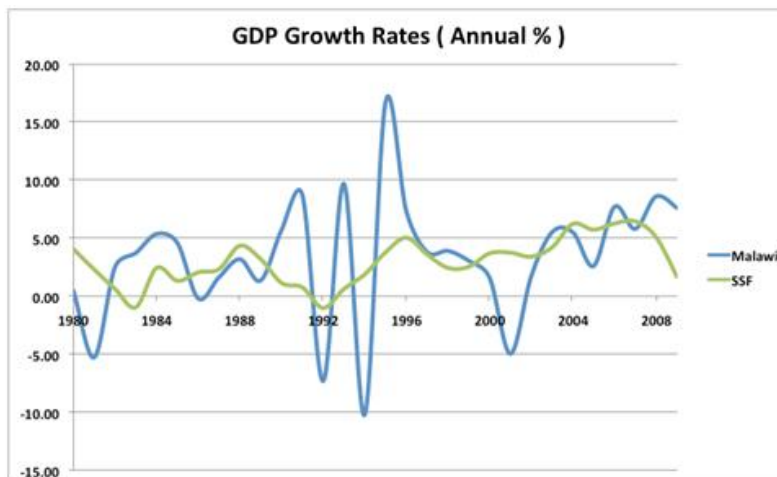


Source: Created by author based on World Bank (2011) *World Development Indicators* (as posted on the World Bank website; downloaded on June 7, 2011).

Clearly, Malawi has struggled to increase its income per capita. Based on the US\$700 income per capita income, an average Malawian will earn very close to \$2-a-day, and that is still an overestimation of what the majority of Malawians earn due to some rich Malawian pushing up the average. Indeed, based on the latest poverty headcount data available, 90.5 percent of the Malawian people lived below \$2-a-day in 2004, and 73.9 percent of the Malawian population lived below

\$1.25 in 2004.² These high poverty headcount ratios explain why Malawi remains to be one of the poorest countries in the world if measuring poverty by GDP per capita.

Figure 2: GDP Growth Rates, Malawi vs. SSF



Source: Created by author based on World Bank (2011) *World Development Indicators* (as posted on the World Bank website; downloaded on June 7, 2011).

Looking at Figure 2, we can see that Malawi’s annual GDP growth rates have been extremely volatile, surpassing once 17 percent and twice nearly 10 percent, while they also surpassed once negative 10 percent and three times negative 5 percent (mostly due to weather-related disasters like the droughts as well as floods devastating the lives of millions of people across Malawi). Comparing Malawi’s GDP growth rates with that of SSF, they are despite more volatile in Malawi on average comparable to that of SSF. So the reason for Malawi’s divergence from SSF in terms of income per capita is largely due to the fact that Malawi started out so much lower and that Malawi also had a slightly higher fertility than SSF, which lowers the benefits from GDP growth per person.

The increasing trend in Malawi’s GDP growth since 2002 (which manage to surpass the regional average) maybe a reflection of the change of leadership from Mr. Bakili Muluzi to Mr. Bingu wa Mutharika in 2004. Moreover, one possible explanation for improvements experienced in Malawi’s annual GDP growth rates may result from the introduction of the Malawi Growth and Development Strategy in 2006. The strategy identifies six key areas that define the direction the country intends to take between 2006/2007 and 2011/2012 fiscal years. The six key areas that are critical for immediate improvement are: agriculture and food security; irrigation and water development; transport infrastructure development; energy generation and supply; integrated rural development; prevention and management of nutrition disorders and HIV/AIDS.

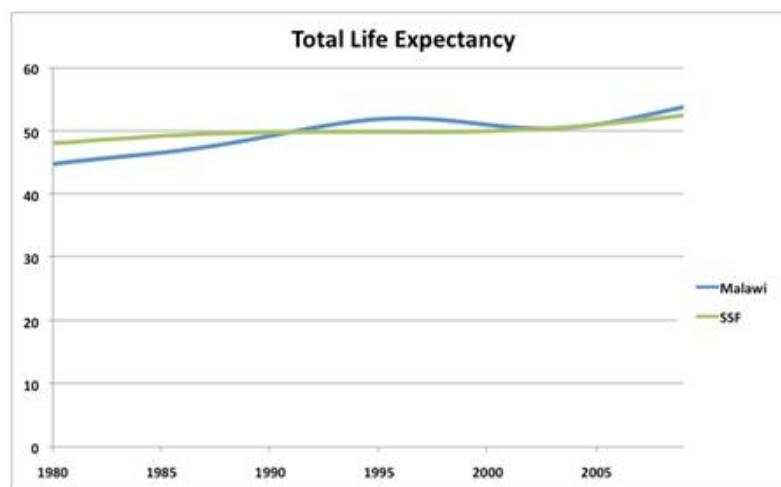
² World Bank (2011).

III.2. Malawi's Progress with Social Development

The southern African region is regarded as the most highly affected region by HIV/AIDS. With high prevalence rates across the region, life expectancy is a crucial indicator that has been affected with the continued deaths of HIV/AIDS infected individuals. In 2008, 1.9 million adults and children in Sub-Saharan Africa were newly infected and 1.4 million died (UNAIDS, 2008). Moreover, about two-thirds of all people infected with HIV (22.4 million) live in this region, which is home to about one-tenth of the global population. AIDS is likely to remain the leading cause of death in Sub-Saharan Africa for the next several decades (Chin, 2007). Given this situation, the regional life expectancy is under threat from improving.

Despite the high prevalence of HIV/AIDS in the region as well as in Malawi, life expectancy in Malawi has experienced a significant improvement until the mid-1990s and then again more recently, see Figure 3. While the average life expectancy of a person in Malawi was about 45 years in 1980, the average Malawian born in 2009 can expect to live approximately 54 years. While Malawi had a lower life expectancy than SSF for many decades, Malawi surpassed SSF's life expectancy in 1992. It then rose relatively sharply in the subsequent years, until it started to decline in 1997, due to the far higher HIV/AIDS prevalence in Malawi than in the average SSF country.³ It even dropped below that of SSF during 2003-2005, after which it recovered and is now about 2 years higher than for the average SSF country. This is a striking achievement for a nation being classed as one of the income-poorest countries in the world.

Figure 3: Total Life Expectancy at Birth, Malawi vs. SSF



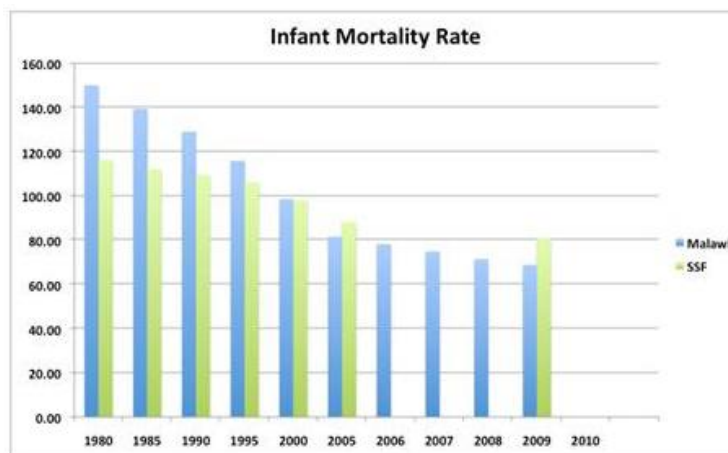
Source: Created by author based on World Bank (2011) *World Development Indicators* (as posted on the World Bank website; downloaded on June 7, 2011).

Figure 4 shows the infant mortality rates of Malawi and the average SSF country. Here too, despite far higher infant mortality rates in Malawi than in SSF in the early 1980s, Malawi reduced its rate below that of SSF by 2005. Today, 69 infants die out of 1000 live births in Malawi, while in SSF slightly more than 80 infants die out of 1000 live births. This achievement for Malawi is even more

³ Based on UNAIDS (2008), almost 12 percent of Malawi's population is infected with HIV/AIDS.

striking than Malawi’s life expectancy, keeping in mind how far behind Malawi was in 1980 compared to the average SSF country and keeping in mind that HIV/AIDS has become a major source for maternal deaths in Malawi (more than in SSF), which leaves many children motherless each year and that these children are ten times more likely to die within 2 years of their mothers’ death.⁴

Figure 4: Infant Mortality Rate (per 1000 live births), Malawi vs. SSF



Source: Created by author based on World Bank (2011) *World Development Indicators* (as posted on the World Bank website; downloaded on June 7, 2011).

IV. Some Possible Explanations for Malawi’s Development Puzzle

While the full explanation for Malawi’s development puzzle is complex, there are some government policy interventions that contributed to Malawi’s social progress and some other government policy interventions that discouraged economic growth. Here, we look at investing in immunization, access to safe water and sanitation, corruption and protectionism.

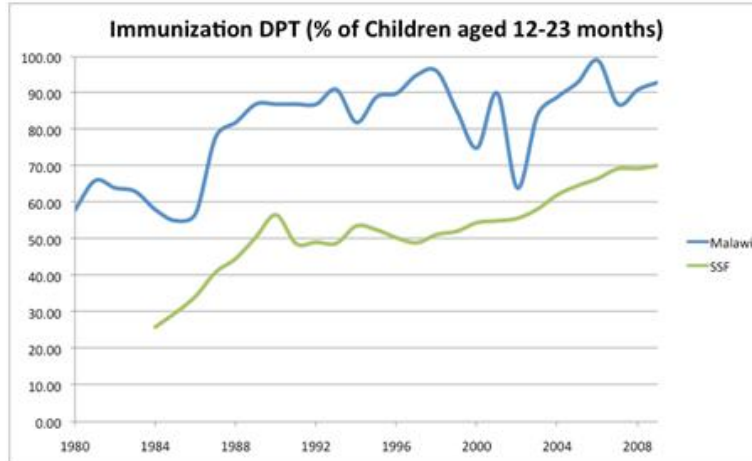
IV.1. Investing in Immunization

In the previous section, we found that infant mortality rates in Malawi declined by more than half from 150 per 1,000 live births in 1980 to 69 per 1,000 live births in 2009. Consistent with the decline in infant mortality, Figure 5 shows that Malawi’s immunization rates against diphtheria, pertussis (whooping cough) and tetanus (commonly known as DPT) grew from 58 percent in 1980 to 93 percent in 2009. Though Figure 5 shows a high volatility in Malawi’s immunization rates, the more important point is that Malawi’s immunization rates were consistently above those of SSF throughout the last 30 years. Given that no reliable data is available for either Malawi or SSF before 1980, we cannot say if Malawi’s immunization rates were below that of SSF during the 1960s, but what is clear is Malawi has paid much more attention to immunization against DPT than SSF and has nearly reached universal coverage. The same applies to immunization rates

⁴ UNICEF (undated) *Improve Maternal Health*; available at: <http://www.unicef.org/mdg/maternal.html>.

against measles, which increased from 49 percent in 1980 to 92 percent in 2009 in Malawi, while the immunization rates against measles reached only 68 percent in SSF in 2009.⁵

Figure 5: DPT Immunization Rates, Malawi vs. SSF



Source: Created by author based on World Bank (2011) *World Development Indicators* (as posted on the World Bank website; downloaded on June 7, 2011).

Munthali (2007) notes that the Ministry of Health has been by far the largest supplier of vaccinations in the country. Furthermore Munthali also records that vaccines are delivered to rural areas through outreach clinics established by the Ministry of Health. Overall, support from various donors and civil society has ensured that Malawi continues to make significant progress in providing vaccinations to children nationwide.

IV.2. Improving Access to Safe Water and Sanitation

Like elsewhere, access to clean water has been a key factor in reducing the prevalence of diseases such as diarrhea and cholera in Malawi. Roberts et al. (2001) conducted a study in a refugee camp in Malawi whereby covered water containers were used to store drinking water. Before that, the refugee camp had several repeated outbreaks of diarrhea and cholera due to contamination of the storage facility. The findings of the study indicated that household contamination of drinking water contributed to the outbreak of diarrhea and cholera.

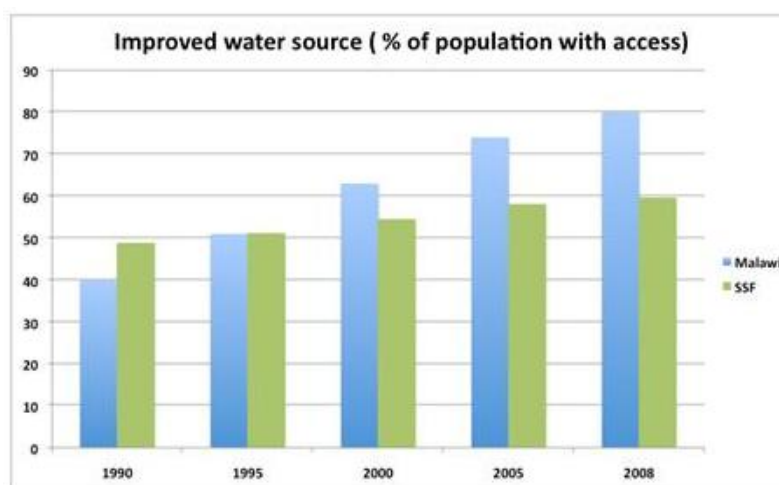
The findings of Roberts et al. (2001) signify the importance of clean water and how it contributes to health. Having improved access to contamination free water and safe storage facilities are paramount to preventing water borne diseases. Therefore, having access to clean water requires complimentary support of a safe water storage facility in order to be completely successful. Furthermore, Roberts et al. (2001) also found that a proper method of chlorination was safer than using water containers. However, water containers were the more widely used method than chlorination.

⁵ World Bank (2011).

Figure 6 shows the progress Malawi and SSF made with providing access to improved water sources. In 1990, 40 percent of the Malawian population had access to an improved water source. Eighteen years on, a staggering 80 percent have access to safe water. In contrast to Malawi, progress in improving the access to an improved water source in SSF has been relatively slow. In 1990, the SSF region had far higher access rates than Malawi: almost 50 percent of the SSF population had access to safe water (10 percentage points more). Yet, after only 5 years (in 1995), Malawi had basically caught up with SSF and today, the SSF region has only managed to spread access of an improved water source to just below 60 percent.

Malawi’ doubling of the percentage of population with access to safe water in only 18 years is due to the development of hundreds, if not thousands, of wells and boreholes nationwide through development organizations, both non-governmental and governmental. Moreover, the recorded progress in access to an improved water source and the use of covered containers to store water can be strongly correlated to the improvements Malawi has experienced in life expectancy and infant mortality.

Figure 6: Access to Safe Water, Malawi vs. SSF



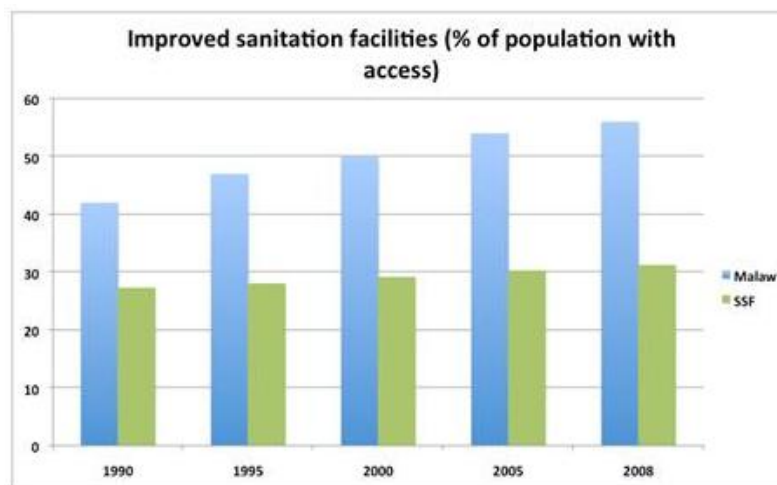
Source: Created by author based on World Bank (2011) *World Development Indicators* (as posted on the World Bank website; downloaded on June 7, 2011).

IV.3. Improving Access to Sanitation

In addition to access to safe water, access to improved sanitation facilities is usually considered equally crucial to combat diseases. Good sanitation facilities and improved access to water protect from pathogenic bacteria and viruses that trigger diseases such as diarrhea. Montgomery and Elimelech (2007) report that, the global figures that describe the lack of water and sanitation facilities are alarming. An estimated 2.6 billion people live without improved sanitation services. According to Montgomery and Elimelech, having a connection to a public sewer or septic system or making use of ventilated pit latrines qualifies as improved access to sanitation services. As Montgomery and Elimelech (2007, p. 23) also note that “clean water and sanitation are essential elements in achieving a basic standard of health for the globe.”

Figure 7 presents a stark contrast in access to improved sanitation between Malawi and the SSF region. In 1990, the percentage of population with access to improved sanitation services stood at about 43 percent, which increased to 56 percent by 2008. In contrast, the SSF region in 1990 had a mere 27 percent with access to improved sanitation services and by 2008, SSF managed to improve access to sanitation by only 3 percent. Clearly, Malawi's progress in providing access to safe water and sanitation is one key factor for Malawi's progress with regards of increasing life expectancy and reducing infant mortality.

Figure 7: percent of population with access to improved sanitation facilities: Malawi vs. SSF



Source: Created by author based on World Bank (2011) *World Development Indicators* (as posted on the World Bank website; downloaded on June 7, 2011).

IV.4. Government Policies: Corruption and Protectionism

Stephanie Hanson (2009) considers SSF to be one of the most corrupt regions in the world. According to the Transparency International's Corruption Perception Index (CPI), out of the ten most corrupt nations in the world in 2010, six are in SSF. Furthermore, Transparency International (2010) reports that about three quarters of the countries score below five on the corruption perception index. A score below 5 and moving towards zero indicates high corruption. However, a score above five and moving toward 9 indicates a much cleaner and less corrupt environment.

In Africa, corruption ranges from high profile political grafts to small-scale bribery of police and government officials. Hanson (2009) reports that in 2002, an African Union study found that corruption costs the SSF region \$150 billion each year. Considering the fact that many nations in the region depend on foreign aid, the loss of such a large sum each year due to corruption, implies a significant loss of development and growth. Moreover, Hanson (2009) finds that the cost of doing business increases, foreign direct investment is less attractive and in some regions, and corruption even fuels unrest.

However, in recent years, local governments and foreign donors have stepped up their fight against corruption and transparency. Local governments, like in Malawi, have initiated long lasting publicity campaigns with regards to corruption in order to raise awareness of the malpractice.

Moreover, Malawi has also implemented a benefits package for individuals who report corrupt practices that lead to the prosecution of perpetrators. In addition, foreign donors analyze the level of transparency, corruption, human rights and freedom in a nation before releasing funds.

Table 1: 2010 Corruption Perception Index for Sub Saharan Africa

RANK	REGIONAL RANK	COUNTRY / TERRITORY	RANK	REGIONAL RANK	COUNTRY / TERRITORY
33	1	Botswana	127	27	Uganda
39	2	Mauritius	134	28	Nigeria
45	3	Cape Verde	134	28	Sierra Leone
49	4	Seychelles	134	28	Togo
54	5	South Africa	134	28	Zimbabwe
56	6	Namibia	143	32	Mauritania
62	7	Ghana	146	33	Cameroon
66	8	Rwanda	146	33	Côte d'Ivoire
78	9	Lesotho	154	35	Central African Republic
85	10	Malawi	154	35	Comoros
87	11	Liberia	154	35	Congo-Brazzaville
91	12	Gambia	154	35	Guinea-Bissau
91	12	Swaziland	154	35	Kenya
98	14	Burkina Faso	164	40	Democratic Republic of the Congo
101	15	Sao Tome and Principe	164	40	Guinea
101	15	Zambia	168	42	Angola
105	17	Senegal	168	42	Equatorial Guinea
110	18	Benin	170	44	Burundi
110	18	Gabon	171	45	Chad
116	20	Ethiopia	172	46	Sudan
116	20	Mali	178	47	Somalia
116	20	Mozambique			
116	20	Tanzania			
123	24	Eritrea			
123	24	Madagascar			
123	24	Niger			

Source: Created by author based on the more detailed table of Transparency International (2010), pp. 13-14.

Table 1 comprises the 47 nations of Sub-Saharan Africa (SSA) included in the 2010 CPI. CPI scores vary from as high as 5.8 in Botswana and as low as 1.1 in Somalia. Malawi ranks 10th in the region and 85th in the world, despite high profile cases of corruption, involving former presidents and members in the top of the government hierarchy.

Taking into account that Malawi has very few natural resources, this explains partly why Malawi has failed to attract foreign investment. Like many others, Jensen (2003) acknowledges the importance of foreign direct investment (FDI) in today's global economy. FDI is an engine of employment, technical progress, productivity improvement and ultimately, economic growth. On the other hand, Jensen (2003) points out that governments are pressured to provide a more hospitable climate to foreign multinationals. On many occasions, domestic policy need be altered and at times the de-facto sovereignty of the nation state and democratic governance too.

Malawi may rank the 10th least corrupt nation in the region; however, protectionist policies prevalent in the current Mutharika administration hinder further economic growth and development in the nation. For example, the current administration's stance on stringent conditions for agricultural corporations and the setting of minimum prices have sent a bad signal to foreign investors. In late 2009, the Chief Executive Officer of Malawi's largest tobacco exporting firm (Alliance One Inc.) was deported over allegations of buying tobacco at the Lilongwe auction floors for a price below the minimum.⁶ Regarding such controversial matters, commentators believe that the authoritarian rule being adopted by the current leader, Mr. Bingu wa Mutharika, hinders the country's credibility and attractiveness as a lucrative investment destination.⁷

The current government has on many occasions stressed the importance to empower indigenous Malawians. Given that Malawi is predominately an agricultural based net importer, Malawi faces tough challenges in transitioning into a manufacturing based net exporter. Moreover, fierce competition from the likes of Zambia and Mozambique further place Malawi in a difficult position in the region.

V. Conclusion

*"It's up to us. We can choose to shift the responsibility, or, as the professor proposes here, we can choose to shift the paradigm."*⁸

Malawi has certainly lagged behind in improving average per capita income despite enjoying periods of significant economic growth. Nevertheless, indicators pertaining to individual health and access to basic resources have experienced significant improvements since the 1980s. As Bono mentions, the international community can either choose to shift the responsibility or model used, to assist developing countries in order to bear improvements in a nation like Malawi.

It comes as a surprise that despite having one of the world's lowest per capita incomes, Malawi has seen such improvement in individuals' health and access to basic resources. However, international aid, both from foreign governments and non-governmental organizations have contributed immensely to improving individual health and access to resources. Moreover, with continued coordination between supranational institutions such as, the United Nations and World Bank, and the Malawi government, development projects in rural areas across Malawi have been key to yielding such impressive results since the 1980s. Life expectancy, infant mortality, immunization rates (DPT), access to an improved water source and access to improved sanitation facilities all outperform the SSF average when compared.

⁶ Jomo (2009).

⁷ On the other hand, Sachs (2012) gave credit to the late President Bingu wa Mutharika for having engineered an agriculture-led boom in Malawi, one that pointed a way for Africa to overcome its chronic hunger, food insecurity, and periodic extreme famines.

⁸ Bono in 2004; quoted in Sachs (2005) p. xv.

Despite improvements in health, access to basic resources and corruption, income per capita has remained almost stagnant since the 1980s. Malawi ranks the 10th least corrupt nation in SSF and government policies seem to be a hindrance in achieving growth related to per capita income. Protectionist policies instigate fear amongst foreign investors, deterring much needed investment Malawi requires thus, the economy fails to create jobs and progress in raising per capita income.

A more open, diplomatic and welcoming government can be a starting point in order to woo foreign investors. Furthermore, developing institutions that are responsible for coordinating issues pertaining to education, business activity and security can boost investor confidence and promote Malawi as a nation in which foreigners can invest, without facing persecution or living in fear due to the lack of enforcement of property rights, which Malawi has set up well already. Despite having a well-coordinated institution, which deals well with enforcing property rights, the core target area for improvements lie in rural Malawi. By expanding health and education facilities across Malawi, you build a nation rich with skilled human capital. Given good government policies, this can attract large foreign investments to Malawi. With at least a job, you can hope to see a rise in per capita income.

References

- Chin, James (2007) *The AIDS Pandemic: The Collision of Epidemiology with Political Correctness* (Oxford: Radcliffe Publishing).
- Ellis, Frank; Milton Kutengule; and Alfred Nyasulu (2003) “Livelihoods and Rural Poverty Reduction in Malawi”, *World Development*, Vol. 31, No. 9 (September), pp. 1495-1510; previous draft available at: <http://www.odi.org.uk/work/projects/03-food-security-forum/docs/ladderwp17.pdf>.
- Government of Malawi (2006) *Malawi Growth and Development Strategy: From Poverty to Prosperity 2006-2011* (Lilongwe, Malawi: Government of Malawi); available at: <http://www.imf.org/external/pubs/ft/scr/2007/cr0755.pdf>.
- Hanson, Stephanie (2009) “Corruption in Sub-Saharan Africa”, Washington, DC; Council on Foreign Relations, Inc., Backgrounder (August 6); available at: www.cfr.org/democracy-and-human-rights/corruption-sub-saharan-africa/p19984.
- Jensen, Nathan M. (2003) “Democratic Governance and Multinational Corporations: Political Regimes and Inflows of Foreign Direct Investment. *International Organization*. Vol. 57, No. 3 (Summer), pp. 587-616; available at: <http://www.duke.edu/~gelpi/jensen.pdf>.
- Joint United Nations Programme on HIV/AIDS (UNAIDS) (2008) *Report on the Global AIDS Epidemic* (Geneva, Switzerland: UNAIDS), pp. 39-40; available at: www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/2008/2008_Global_report.asp.
- Jomo, Frank (2009) “Malawi Deports Universal, Alliance Tobacco Officials”, Bloomberg Internet Resource (September 9); available at: www.bloomberg.com/apps/news?pid=newsarchive&sid=aHJEtWWicSzs.
- Madise, Dingiswayo (2007) “Challenges in the Fight Against Corruption in Malawi — Some Thoughts”, presented at a Meeting on Deepening the Judiciary’s Effectiveness in Combating Corruption, UNECA, Addis Ababa, Ethiopia (19-23 November); available at: www.uneca.org/gpad/events/corruption/malawi.pdf.

- Montgomery, Maggie A. and Menachem Elimelech (2007) “Water and Sanitation in Developing Countries: Including Health in the Equation”, *Environmental Science and Technology*, Vol. 41, No. (January), pp. 17-24; available at: http://www.yale.edu/env/elimelech/publication-pdf/ES&T_Feature_Montgomery_Elimelech_January_2007.pdf.
- Munthali, Alister C. (2007) “Determinants of Vaccination Coverage In Malawi: Evidence from the Demographic and Health Surveys”, *Malawi Medical Journal*; Vol. 19, No. 2 (June), pp. 79-82; available at: <http://www.ajol.info/index.php/mmj/article/viewFile/10934/37728>.
- Peters, Pauline (2006) “Rural Income and Poverty in a Time of Radical Change in Malawi”, *Journal of Development Studies*, Vol. 42, No. 2, pp. 322-345.
- Roberts, Les; Yves Chartier; Oana Chartier; Grace Malenga; Michael Toole; and Henry Rodka (2001) “Keeping Clean Water Clean in a Malawi Refugee Camp: a Randomized Intervention Trial”, *Bulletin of the World Health Organization*, Vol. 79, No. 4, pp. 280-285; available at: <http://www.scielosp.org/pdf/bwho/v79n4/v79n4a01.pdf>.
- Sachs, Jeffrey D. (2005) *The End of Poverty: Economic Possibilities for Our Time* (New York: Penguin Group).
- Sachs, Jeffrey D. (2012) “How Malawi Fed Its Own People”, *New York Times*, The Opinion Pages (April 19); available at: <http://www.nytimes.com/2012/04/20/opinion/how-malawi-fed-its-own-people.html?pagewanted=all>.
- Transparency International (2010) *Corruptions Perception Index 2010* (Berlin, Germany: Transparency International); available at: http://www.transparency.org/policy_research/surveys_indices/cpi/2010/in_detail.
- World Bank (2011) *World Development Indicators* (Washington, DC: The World Bank); as posted on the World Bank website: <http://data.worldbank.org/data-catalog/> (downloaded on June 7, 2011).