

# AFRICA

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(CADPR)

# International Journal of African Development

Volume 2, Issue 2, Spring 2015



Western Michigan University  
College of Arts and Sciences  
Department of Economics



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Journal of African  
Development**

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Department of Economics and  
Center for African Development Policy Research (CADPR)**

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### Editorial Note

As the Chief Editor, I am pleased to introduce this second issue of the second volume of IJAD for spring 2015. This volume constitutes the 4th issue of IJAD that began in fall 2013. This issue presents seven papers on broad areas of challenges and opportunities for sustainable development. They range from a gender gap in higher education, corruption, child labor, Internet for regional integration, regional public sector reform, maternal employment, culture of manufacturing technology and Ebola in West Africa. While most of the papers in this issue focus on African states, one paper focuses on the challenge of closing the gender gap opportunities in the United States in higher education.

IJAD is an interdisciplinary journal on challenges and opportunities for sustainable development. The editors view human and social progress as a multidimensional process involving sustainable economic development, the advancement of human capabilities, environmental security, a richer cultural life, and reduced poverty through access to equal opportunity and greater political and social freedom and justice with appreciation of human and cultural diversity and inclusiveness. The previous vol. 2 issue 1 in fall 2014 was comprised of six papers that focused on the theme of governance of agriculture, natural resources, food and nutrition security and land rights. We hope this issue will be of great interest and value to our readers as the previous ones have been.

I am pleased to report the past three issues were widely received not only in Africa but all other parts of the world including Europe and North America based on the reporting system in ScholarWorks. At the time of publication of this issue, IJAD's first three issues had gained worldwide interest with over 5,000 downloads from 67 countries.

Sisay Asefa, Chief Editor

International Journal of African Development (IJAD)

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## Challenges Facing Female Leaders of Color in U.S. Higher Education

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### Abstract

Despite a myriad of challenges including the slow pace of rising to the top and the low compositional diversity in most university leadership, women of color are becoming increasingly visible in higher education leadership. This paper investigates the phenomena of the growing numbers of women of color in top positions, with the aim of debunking the myth of the invisibility of black women in leadership positions in higher education. The findings indicate that although women in the U.S. earn the majority of postsecondary degrees and 26.4% of college presidents are women, with 4.5% of them being women of color, women still have a long way to go before they have equal status with men in university leadership positions. Theories and practices of leadership now focus on competencies that have typically and traditionally been associated with women, and not valued as workplace leadership competencies. An advantageous increase in female academicians means these women bring a different level of knowing, pose different questions, and share different experiences than their male counterparts. Unfortunately, female academicians' experiences do not yet factor into public policies and decision-making.

Keywords: *leadership, women of color, higher education, social inclusion, workplace bias, disparity, social exclusion, social barriers*

Although female academicians of color are increasingly visible in leadership positions in higher education, the challenges that they contend with in order to achieve this status are not for the faint of heart. Challenges described in the literature include racial and gender bias at work. Even with affirmative action and tokenism, the number of racial discrimination settlement cases and unequal pay cases brought against corporate organizations and universities evidences gender bias and unequal pay.

Identifying aspects of women of color in higher education are *black, African American, Latina, Hispanic, or African*. These identifiers of women of color present a barrier to social inclusion even after completion of doctorate degrees and acceptance of faculty positions in U.S. universities. The World Bank defines social inclusion as the process of improving the ability, opportunity, and dignity of people who are disadvantaged on the basis of their identity to take part in society such identity markers as race, income, employment status, social class, geographic location, personal habits, appearance, education, religion, and political affiliation. The bases for social exclusion include race, income, employment status, social class, geographic location,

personal habits, appearance, education, religion, and political affiliation. The definition of social inclusion emphasizes the relationship of dignity and well-being to the impact of exclusion and identity formation as well as ability to take part in society.

The World Health Organization (WHO) defines gender disparity as any distinction, exclusion, or restriction made on the basis of socially constructed gender roles and norms (WHO, 1998) and views gender disparity as an intersection of economic inequality and racial or ethnic hierarchy. Social categorization often generates judgments about an individual's capacity to function effectively, even though, Blustein (2006) indicates that these phenotype results in "no inherent meaning" (p. 154). Ongoing entrenchment of and repeated exposure to social categorizations fortifies social barriers against women of color's access to leadership positions. The few women of color who leap over these hurdles find pushback from additional barriers related to their performance, interpersonal relations, and ability to network.

The World Bank identifies six core governance indicators. The governance indicator of voice and accountability hold particular relevance to this discussion of women's access to leadership roles. The invisibility of women, and specifically women of color, in academic leadership is tantamount to the exclusion and denial of women's voices, which indicates lack of full accountability on the part of leaders. Without audible voices, women cannot expect their issues and concerns, innovation and intuition, to receive thorough exploration, value assessment, incorporation, and resolution.

In 1995, The Glass Ceiling Commission (TGCC) categorized barriers to the appointment of women and minorities to top leadership positions; TGCC identified these categories as societal, governmental, internal business, and business structural barriers. Of primary interest to this examination are the societal barriers to opportunity and attainment, which include prejudice, and bias, and culture-, gender-, and color-based differences, and which are demonstrated in the report as wage disparities and slower promotion rates. The TGCC observed that since most organizations are Caucasian-dominated within their structures and they promote from within, organizations such as universities may fail to comply with the governmental affirmative action laws by creating business structural barriers within their recruitment, progression, compensation, and social outreach strategies, without detection or penalization.

Gender and racial discrimination cases are too profuse to cite here; for example, in 2013 alone, the *Equal Employment Opportunity Commission* and Fair Employment Practices Agencies reported over 300 cases. The increase in settlement cases and fines nationally has not deterred workplace gender and racial bias as indicated by prevalent racist attitudes in 2014, more than 50 years since women's rights became human rights and were enacted into law for example Title VII of the Civil Rights Act of 1964. Universities are not exempt, as demonstrated by the many cases of discrimination and sexual harassment reported by the American Association of University Women (2014) and the *U.S. Equal Employment Opportunity Commission* (2012). That said, in 2004, an arbitration panel found a famous financial institution guilty of racial discrimination and settled at \$2 million, and again in August 2013 at \$160 million. A federally-insured financial institution was not exempt in the settlement cases, and in 2013 was fined \$2.2 million in a racial

discrimination case, and was ordered to extend job offers, with appropriate seniority of position, to ten black individuals when the judge determined that the institution had applied unfair and inconsistent selection criteria in the hiring process (*USA Today*, 2013; *Los Angeles Times*, 1996; Dyer, 2004).

### **Barriers and Exclusion**

Most studies indicate that a majority of women in academic leadership positions, especially women of color, have experienced exclusion, condescension, isolation, dismissal, communication challenges, lack of validation or appreciation, and failure to receive due credit. Linden (2012) posits that women of color would be more successful if organizational and national pay guidelines, reporting and arbitration procedures, internal recruitment, and promotion and development systems and processes did not prevent them from advancing professionally proportionately to their increasing numbers and higher education levels. In for-profit business organizations, women do not represent a significant number of leadership roles and therefore cannot access the legitimate power necessary to gain substantial leadership, which then positions them to access more legitimate power to advance organizations through their leadership, and so on. Currently, for-profit organizational leadership depends on male-dominated leadership teams to develop new business, secure top clients, and produce increasing profits from their male-dominated clients and business networks. Women and women of color are a reluctant acquiescence in these male networks and decidedly underestimated for the unique and diverse values they provide.

Wilson (1998) identifies four barriers that contribute to the invisibility and disparity that women of color face: the “wage gap, institutional kinship, the ‘ole boy’ system, and the role played by prejudice” (p. 20). The wage gap and prejudice are uniquely common to women of color (Women’s Bureau, 2012). Combs (2003) writes that, unlike their Caucasian counterparts, women of color have to contend with the duality of race and gender, and the associated biases toward both, if they are to improve their organizational standing and career advancement opportunities. In the case of for-profit corporations, opportunities for professional development, inclusion in informal networks, beneficial mentoring, and sponsoring are out of reach for most women, especially women of color. Sponsoring, which occurs when a senior leader with legitimate power and high financial resources offers continuing support and provides access to informal networks, helps to dissolve barriers and creates inclusion, whether within academic or for-profit organizations.

Further barring women’s access is the assumption that female and male leaders’ success is based on the same character qualities, and that “imitating white male behavior is the key to success” (Vanderbroeck, 2010, p. 765). Vanderbroeck argues that current measurements for success designed by white male-dominated panels and used in white male-dominated organizations, reinforce these two assumptions. Similarly, the scholars and theorists who observe these disproportions often come from affluent, privileged, highly educated, and often white, male-dominated backgrounds, making it again challenging to build research literature and support for public policy initiatives (Blustein, 2006).

### **The Increase in Numbers**

Obviously, not every qualified academic leader can be a college dean or president, but current numbers are low when compared to the increased doctoral degrees awarded to women of color in recent years. The trend indicates that of all doctorate degrees awarded to people of color in 1999, there was a 61% increase to those awarded to the women of color and a 65% increase in 2010 (National Center for Education Statistics, 2012, Indicator 47). Data from the American Association of University Professors indicates there are 494 female presidents out of the 2,148 four-year degree institutions positions. Some of the universities led by women of color include Brown University, University of Maryland Eastern Shore, University of Pennsylvania, Virginia Union University, Florida A&M University, Alabama University, Fisk University, Kentucky State University, Spelman College, Morgan University, Jackson State University, and Kalamazoo College, among others.

### **Data and Methodology**

Twenty business articles, fourteen government reports, seven books, four peer-reviewed journals, and several newspaper articles that focus on higher education and women of color contributed to the research for this paper, as found through key words such as *women in higher education leadership*, *women of color*, *higher education*, *workplace bias*, *disparity*, and *diversity*. The goal was to review research that demonstrated the best representation of pertinent events and experiences to provide a deeper understanding of how women are becoming visible in top positions. Additionally, the researchers hoped to describe the barriers and challenges still facing women of color in the workplace, and the lack of access to leadership positions and developmental social networks from a refreshed perspective since global diversity initiatives have been on the rise. This information leads to generalizable interpretations in the conclusion.

### **Findings and Discussion**

In the condensed literature review, recurrent themes emphasize that female faculty of color have unique challenges compared to their white and/or male peers. For example, most authors cited that, because female faculty members of color are neither male nor white, they do not have access to the privileges inherent in male and/or white group membership (McIntosh, 2012). Linking feminism and human rights, Crenshaw (1989) argues that discrimination against women of color is legally invisible due to its insufficient legal definition. Social status and privilege facilitate the legal system's defenses for Caucasian women while failing to defend women of color. Title VII of the Civil Rights Act of 1964, while prohibiting employment discrimination on the basis of race, color, religion, sex, or national origin, does not define what constitutes discrimination, nor does it describe how to identify subtle forms of discrimination such as negative feelings and exclusion from organizational social networks. In higher education, Title IX of the Civil Rights Act of 1964, the Equal Opportunity in Education Act, is violated so often without legal detection because it is linked with academic excellence and authorship. Reported

discrimination complaints are frequently thrown out before they become legal cases (Department of Education, 2014; Dyer, 2004).

Phillips (2012) argues that “gender and race have been a profound determinant of one’s political rights, one’s location in the labor market, and one’s sense of self identity” (p. 1). Racism is therefore not a simple collection of beliefs and attitudes, but a conscious, systematic strategy and process of social and political control and stratification aimed at excluding some groups of people from opportunities and benefits, undermining people’s lives and rights, eroding their self-worth, and upholding the degradation of their global consciousness.

The organization Catalyst Women (2004; 2005; 2007) cites a number of barriers to advancement that it terms “components of the glass and concrete ceiling,” which include the following absences: lack of an influential mentor or sponsor, lack of informal developmental networking opportunities with influential colleagues, lack of company role models who are members of same racial/ethnic group, and the lack of high visibility assignments.

Princeton University’s 2013 self-study describes gender imbalances as grounded in behavioral differences and asserts that women undersell themselves and fail in interviews for top positions or do not seek them at all due to low self-esteem. How Princeton University’s self-study determined that women have low self-esteem is not conclusive since the variables used are more aligned to the white male prototype.

The Global Gender Gap Report opens its 2013 report with the observation that “countries and companies can be competitive only if they develop, attract, and retain the best talent, both male and female” (p. 1). It is imperative that global governments create public policy frameworks designed to improve access and opportunities for all women and develop effective workplaces where the best talent succeeds (Global Gender Gap Report, 2013).

Researchers have discovered that workplace bias manifests itself in a variety of ways, including derogatory comments and gestures, disregard and disrespect of an individual’s contribution, exclusion from informal and formal networking opportunities, unfair performance evaluations, denial of promotions or advancement, different treatment from peers, and limited access to information and resources that eventually and negatively affect the individual’s ability to perform successfully (Johns, 2013).

Barak (2005) reports from her studies that employees of color “who are more included in the organization’s decision-making and information networks are more satisfied, committed to the organization and feel more productive” (p.1). She suggests a model for implementing diversity in the workplace so organizational leaders can demonstrate how they value individual and intergroup differences, alleviate the needs of disadvantaged groups without creating a culture of entitlement, and correct discriminatory hiring procedures immediately from the inquiry phase all the way through the interview, performance, and compensation phases. The findings are further supported by Cappelli (2006), who reports from numerous sources that the reason women’s enrollment in business and law schools has greatly increased is because more women are moving away from higher education jobs into competitive fields that are becoming more inclusive like investment banking, consulting, bioscience, and engineering.

Although the for-profit corporate world is witnessing an increasing number of new female graduates eager to enter its ranks, the coveted positions from entry-level professionals to top leadership positions still remain less accessible to women of color. According to Cappelli (2006), recruiters at top firms seek women to fulfill diversity initiatives, but women, and particularly women of color, are not the face of money. Top executives, determined to increase profits and ensure the longevity of their organizations, feel less compelled to usher women into chief financial, operational, and decision-making roles (Cappelli, 2006).

When women occupy top leadership roles in for-profit industries, these roles tend to be in human resources or marketing (Blustein, 2006; Eagly & Carli, 2003; Johns, 2013). Women who assume such positions are torn between serving the organization and being true to their collaborative and developmental character. In competitive industries such as investment banking and corporate law, traits associated with traditional feminine leadership can have negative impact on a female executive's career.

The challenge that most affects female faculty members of color is the pressure to ignore their identity, beliefs, cultural competencies, and values to fit into a white male prototype in order to succeed (Ibarra, Ely & Kolb, 2013). Such ineffective governance undermines the lives and rights of women of color and their role in academic success, erodes their self-worth, and ultimately perpetuates dysfunction in the global marketplace.

### **Conclusion**

Opportunities for advancement for female faculty members of color have increased; however, a deeper level of exclusion persists. The final frontier of gender and racial equality resides in access to informal networks apart from cronyism and the demystification of white male leadership dominance. The simple practice should be the best person for the leadership role. When social inclusion, gender and racial equality, and recognition of best talent and best performance are the accepted academic standard and business practices, the diverse and innovative outcomes from these practices will benefit the advancement of student education and role modeling through the university system, producing a global academic community whose primary focus is on the best results and solutions for higher education.

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## **False Consciousness as a Major Hindrance to Control of Corruption in Africa**

**John Otieno Ouko**, Eastern Michigan University

### **Abstract**

Corruption is rampant in Africa despite the effort to fight it. An effective fight against corruption requires a clear and firm understanding of the factors that cause and conduce it. Using Kenya as an example, I will examine some of the social, economic, political, and legal factors that have been given as causal explanations of corruption. By focusing primarily on political corruption, I will argue that false consciousness among the masses and leaders has to be overcome for the fight against corruption to be effective, and, by extension, for meaningful development to take place in Kenya and many other African countries.

According to the World Bank (2014), control of corruption is one of the core governance indicators. Without adequate and effective control of corruption, no meaningful development can take place. From 2010 through 2013, Transparency International Corruption Perception Index ranked African nations prominently as having the highest perceived levels of corruption, while the Index did not rank any African nations among the top twenty countries with the lowest perceived levels of corruption. Why is corruption so rampant in Africa? And why has the fight against corruption not been effective?

In this paper, I will examine some of the factors that have been given as causal explanations of corruption and argue that these factors are not the root cause of corruption. I will then explain the problem of false consciousness that is at the core of corruption. Finally, I will highlight a variety of methods that experts have suggested for African governments to battle corruption and argue that, beyond these methods, the problem of false consciousness must be addressed.

### **Corruption and Its Causal Explanation**

According to Mondo (2013), “corruption” is operationally defined as the misuse of entrusted power for private gain (p. 9). In this paper, I will primarily focus on political corruption, which is the misuse of power by government officials for illegitimate private gain. Political graft imposes the largest direct financial cost on a country. Reports indicate that accumulated illicit capital flight from Kenya, hidden in over 40 tax havens, amounted to a staggering Sh566 billion (U.S. \$6.369 billion) as of 2012. Ironically, this is almost the same amount required to clear Kenya’s total external debt stock, which, according to the World Bank, amounted to Sh662 billion (U.S. \$7.44 billion) in 2008 (*Daily Nation*, 2013). Most of this money has been looted from public coffers. Citizens who are already desperately poor are further burdened by public debts that could be offset by stolen cash stashed abroad. Moreover, most of the embezzled funds were borrowed, or begged, abroad in the name of the public. Corruption analysts estimate that at least U.S. \$10 billion, nearly half of Africa’s 2003 foreign aid receipts, depart Africa every year (Africa All Party Parliamentary Group, 2006, p. 14).

Let us take a look at some of the factors that have been given as causal explanation of corruption. First, poor economic conditions depress people's financial situations, which may then force people to look for supplementary income through corruption. This explanation of political corruption is inadequate. Those who engage in political corruption are usually people of means, including high-ranking government officials like cabinet ministers and heads of state. In Kenya for example, cabinet secretaries have been implicated in grand political corruption, including the Goldenberg and Anglo Leasing scandals, in which hundreds of millions of dollars were lost. These are people of means even by international standards. Their salaries are in excess of U.S. \$10,000 per month, excluding various allowances. Secondly, some argue that the legal and institutional systems are so inadequate that people engage in corruption with the belief that they can do so with impunity (Africa All Party Parliamentary Group, 2006). However, in order to strengthen the legal and institutional systems, there must be a political will to change. It is an open secret that lack of political will among leaders in Africa has prevented a strengthening of institutions to fight corruption. Thirdly, some argue that extended family systems engender corruption by exerting financial pressure to fulfill immediate and extended community and familial responsibilities (Wrong 2010). However, a closer look at cases of grand political corruption (in Kenya?) reveals that motives did not include fulfilling extended community and familial responsibilities. Public officials often stash embezzled money in foreign accounts or use it to build skyscrapers, purchase property worth millions of dollars locally and/or abroad, and live in extreme luxury. Therefore, one may safely conclude that political corruption is not primarily instigated by helping the extended family. This leads to the same questions. Why are people of means engaging in grand corruption? Why is there a lack of political will to fight corruption?

### **False Consciousness and Corruption**

False consciousness is a concept derived from Marxist theory of social class (Torrance, 1995). The concept refers to the systematic misrepresentation of dominant social relations in the consciousness of subordinate classes. While Marx did not use the phrase "false consciousness," he paid extensive attention to the related concepts of ideology and commodity fetishism. Members of a subordinate class, including workers, peasants, and serfs, suffer from false consciousness as their perceptions of the social relations around them systematically conceal or obscure the realities of subordination, exploitation, and domination. False consciousness entails the blindness of members of a subordinate class to their own interests. It is an instance of people being bound and blind to their own oppression. Meyerson (2010) discusses false consciousness among the dominating class, as members of the ruling class rationalize their actions through inaccurate perception of their own motives (p. 8). Among the ruling class, false consciousness entails the rationalization or mystification of their pursuit of economic interests. As Meyerson discusses, genuine consciousness depends on the proper assessment of one's position within the class system by members of the different classes (Meyerson, 2010, p. 80).

Let's turn now to false consciousness as a major hindrance to control of corruption in Africa. Michela Wrong (2010) accurately captures the mentality of most African political leaders

with regard to power. She describes most senior government officials' perception of the government as a cake that must be eaten. Government officials are seated at the table, sharing in the cake. In Kenya and many other African countries, politicians who are implicated in grand corruption justify their actions as "their turn to eat". What factors make embezzlement of public funds commonplace? Why is embezzlement normalized for those implicated? Why has there not been admission of guilt by leaders who have embezzled public funds? Let us examine more closely this "it's our turn to eat" mentality.

According to Ikuenobe (1998), corruption in African governance can be traced back to colonialism (p. 123). Colonialism created a legacy that Africans have perpetuated. For instance, the social ethos and norms that emerged from colonialism created an attitude of disdain and apathy. Because of this ethos, the public applauded leaders who embezzled public funds to enrich their communities and themselves. Africans understood that the primary aim of the colonial government was to exploit the African people. Whatever the African people could get from the colonial government was justified as a way of reclaiming from the colonizers what they had stolen from the colonized. Once viewed as a rebellion against colonialism, embezzlement has become a legacy in post-colonial Africa. The different human agents in this dynamic—in this case, the leaders who embezzle public resources or funds, the masses who justify the embezzlement, and the apathetic government employees—are ignorant of the motives that compel their thoughts and actions. This therefore constitutes a case of false consciousness.

Although colonialists appropriated resources from the countries that they colonized, this misappropriation does not constitute corruption in the strict sense of the term, because the colonial administration was established to benefit the colonialists. After independence, most of the African ruling elites retained the colonialist mentality. In other words, the African ruling elites saw their accrual of power as their "turn to eat", an instance of false consciousness among the ruling elite. In Kenya, most political parties fight for political power either because political leaders think it is their turn to eat if they haven't eaten already, or to continue eating if they are already eating, or to eat once again if they already ate at some point when they were previously in power. This "turn to eat" mentality greatly distorts leaders' conceptualization of political power and state resources. In grand political corruption cases like the Goldenberg and Anglo Leasing scandals, the "beneficiaries" were a few elites who, apparently, didn't feel that they had done anything wrong.

In Kenya, as in many African countries, it is not uncommon to hear leaders who embezzle public funds claim contrast government service to church service. The implication of such a statement is that the church has moral order, but the government does not have the same social and moral foundation that imposes responsibility on governing officials. This mentality constitutes a sense of false consciousness among the masses, as they justify or applaud leaders who embezzle public funds. The masses are deluded into thinking that one of their own has grabbed something that does not actually belong to anyone.

In some cases, corrupt government officials have been able to share some of the loot with members of their communities. As Ikuenobe (1998) has noted, "a person who is able to acquire money from the government in the civil public would not be a good person in his community if

he enriches only his private purse; he will be good only if he is able to help his community. So, there is a sense in which an official is indoctrinated to 'see' his duties in the civic public as a kind of 'moral responsibility' to benefit and sustain a primordial public—his community" (p. 123). In this sense, one can argue that in many African countries, Kenya included, one's citizenship of the civic public or people's perception of public service is tied to their own economic gain, for example, income, rather than tied to a sense of civic duty. In Kenya, for instance, absenteeism in the work place and poor job performance among civil servants and other government employees is indicative of their apathy toward public service.

Moreover, as Ekeh (1983) argues, those who have the opportunity to embezzle public funds but do not are shunned by their communities and viewed as "traitors" (p. 110). It is not surprising that, in Kenya, a leader who is accused of corruption appeals to his ethnic base for political and moral support with statements like "our community is being targeted". The primordial public feels that whatever leaders have appropriated belongs to each leader's particular community. Since Kenya attained independence, there has never been a time when the entire populace, irrespective of different ethnic groups, has united to fight against leaders' embezzlement of public funds. Leaders do not embezzle public funds to benefit their communities, even if in some cases certain members of their communities receive handouts.

### **Suggested Methods of Fighting Corruption Are Inadequate**

Experts have suggested a variety of methods for African governments to battle corruption, with a special emphasis on transparency and accountability (Africa All Party Parliamentary Group, 2006; World Bank 2014) . One suggestion is to create anti-corruption agencies; however, given the barriers in Kenya and many other African countries, experts are dubious about the utility of such agencies. Another suggestion is to strengthen existing institutions, as institutional weakness—particularly the imbalance between a strong executive branch and weak legislative and judiciary branches—facilitates corruption. However, the same barrier of political apathy prevents the strengthening of existing institutions.

. A few economists, such as Dambisa Moyo (2010) have suggested that African governments can reduce corruption by reducing dependency on foreign aid. Further the author argues that African governments should cut off foreign aid completely. By encouraging accountability of donors instead of citizens, foreign aid encourages graft and breaks the fundamental relationship between a state and its people. However, it can also be argued that corruption continued unabated in African countries like Kenya and Zimbabwe when donors cut funding, so there is no guarantee that reducing dependency on foreign aid will reduce corruption.

### **Conclusion**

It is apparent that political corruption, which is of course antithetical to development, is rooted in false consciousness. In Marxist revolutionary theory, continuous development of the worker's consciousness and capitalism's crisis tendency precipitates revolution. But what should be done about the rampant political corruption in Africa?

I argue that those who engage in political corruption have distorted moral beliefs, which accounts for why leaders have seen nothing wrong with stealing millions of dollars from the public as their fellow citizens die from starvation and lack of basic health care. Although these leaders may have been exposed to others' moral judgments, they may not share those same beliefs. Another possibility is that they have been taught wrong or inadequate morality—morality that is non-objective. The fight against corruption therefore requires the re-evaluation of moral beliefs and practices, including the inculcation of civic responsibility in children as well as adults, so that we don't perpetuate leadership with distorted understanding of public funds. This re-evaluation should extend to all types and levels of educational, media, state, and municipal institutions and agencies.

Above all, the masses should be educated to understand that political corruption is as much a crime as the shady criminal who robs your local convenience store, who steals your goat or cow, or a burglar. The main difference is that political corruption undermines economic development, which perpetuates poverty. If the public understands this, then they are less likely to indulge leaders' embezzlement of public funds, and are thus enabled to unite in the fight against leaders' embezzlement, irrespective of ethnic group. Only when false consciousness is eliminated can ordinary citizens unite in the fight against corruption. This unity is indispensable for the fight against corruption to succeed.

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# ICTs and Regional Economic Integration: An Anticipatory Scenario for the Horn of Africa

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## Abstract

Development experts are telling increasingly fascinating stories about how human development indices (HDI) among the poor in Africa, Asia, and Latin America have been buoyed by the diffusion of ICTs (Information and Communication Technologies) over the last two decades. According to data compiled by the World Economic Forum, ICTs have facilitated faster and more reliable communication with regard to almost all important spheres of life including healthcare, education, agriculture, commerce, e-banking, the environment, etc. Perhaps the greatest impact of ICTs has been in their democratizing effect and their role in promoting gender equity, especially with regard to access to information that affects basic facets of life which has been beyond reach before either because of geographic distance or because of a lack of facilities such as libraries and clinics. This paper employs the anticipatory scenario-building approach in offering an analysis of potential development implications of ICTs for the Horn of Africa region.

Keywords: *Human development, economic integration, ICT*

*“Technology per se does not solve social problems. But the availability and use of information and communication technologies are a pre-requisite for economic and social development in our world. They are the functional equivalent of electricity in the industrial era. Econometric studies show the close statistical relationship between diffusion of information technology, productivity and competitiveness for countries, regions, industries and firms.”*

Manuel Castells

## Introduction

Development experts are telling increasingly fascinating stories about how human development indices (HDI) among the poor in Africa, Asia, and Latin America have been buoyed by the diffusion of ICTs (Information and Communication Technologies) over the last two decades.<sup>1</sup> According to data compiled by the World Economic Forum,<sup>2</sup> ICTs have facilitated faster and more reliable communication with regard to almost all important spheres of life including healthcare, education, agriculture, commerce, e-banking, the environment, etc. Perhaps the greatest impact of ICTs has been in their democratizing effect and their role in promoting gender equity, especially with regard to access to information that affects basic facets of life which has been beyond reach before either because of geographic distance or because of a lack of facilities such as libraries and clinics.<sup>3</sup>

This paper employs the anticipatory scenario-building approach<sup>4</sup> in offering an analysis of potential development implications of ICTs for the Horn of Africa region. The Greater Horn of Africa (Ethiopia, Eritrea, Somalia, Djibouti, Kenya, Uganda, South Sudan and Sudan) was selected

because, by all U.N. and World Bank indices, the region comprises some of the least developed countries in the world, gauging from indices such as infant mortality, life expectancy, and per capita income.<sup>5</sup> It also represents the largest concentration of “failed states” according to Fund For Peace classifications, a U.S. think tank.<sup>6</sup>

Reasons for this sorry predicament abound, but one of them is that the region has endured some of the longest civil wars in modern world history. Eritrea’s secession from Ethiopia in 1992 was the culmination of a 30-year civil war. The secession of South Sudan from Sudan in 2011 was the culmination of a 28-year civil war. And in Somalia – the theater of a 35-year civil war – the secession of the northern half declared in 1991 threatens to split the country into two or more states. Of the “failed states” of the Horn of Africa, Somalia is at the very bottom in terms of most human development indices.<sup>7</sup> The country had no government for more than 20 years and had a majority of her population either exiled or internally displaced for the last 30 years.<sup>8</sup>

Because of its status within the club of failed states, we will focus on Somalia’s potential for anchoring regional development through deployment of ICTs. We will consider the country’s role in implementing development initiatives put forward by the main regional organization whose mission is to promote development, the Intergovernmental Authority for Development (IGAD), using the anticipatory scenario-building approach.

Anticipatory scenario building is widely used by development experts and change agents who are keen to influence the course of development processes by looking at various likely future outcomes and recommending the best route to the most ideal scenario. According to one definition, “Anticipatory scenarios — also known as prescriptive or normative scenarios — start with a prescribed vision of the future and then visualize how this future could emerge.”<sup>9</sup> Anticipatory scenarios are useful in attempts to head-off possible undesirable outcomes with respect to the convergence of relevant situations for development. Scenarios can be constructed either inductively or deductively depending on the realization of a complete array of necessary elements to bring about a desired outcome.<sup>10</sup> In our Horn of Africa scenario, we will rely on the inductive method where observations are made and thereafter theories are formulated, as all elements required for an ideal development outcome are present in the Somalia context. The elements include: (1) the attainment of a measure of peace and stability and the installment of a functioning government, albeit one that is still relatively weak, (2) the clear development of a “reverse brain drain” process in which Western educated young Somalis return home to establish businesses, (3) the presence of a Somali business diaspora in almost all the neighboring Horn of Africa countries, thus contributing to an informal integration of regional economies, (4) the fast diffusion of ICTs in Somalia and the rest of the Horn region, and (5) African Union and donor-country pressure on governments in the region to effect formal economic integration.

### **Role of ICTs in Economic Development**

Current literature on social and economic development uniformly affirms the consensus that ICTs (here defined as the combination of Broadband Internet and mobile communications) is indispensable for economic growth and enhancing a wide range of human development indices. A

UNDP study in 2006 (*Realizing the Millennium Development Goals: Promoting ICT for Human Development*)<sup>11</sup> found that ICTs affected human development in several important ways: (1) ICTs boosted economic growth: Within just 6 years last decade, global spending on ICTs quadrupled with a corresponding expansion of cross-border commercial activity that boosted GDPs across the board in 12 Asian countries alone. (2) ICTs enhanced human productivity, in large measure by breaking several barriers.

### **ICTs Break Barriers to Knowledge**

The internet is a major delivery mechanism for information and knowledge to segments of the population that lacked access before. With access, even those with limited education were enabled to gain greater knowledge of one's chosen field of interest. This is what communication experts have called the "normalization hypothesis"<sup>12</sup> or the democratizing effect of ICTs. In numerous studies from different regions of the developing world, experts have noted how gender gaps in knowledge, for example, are bridged by the acquisition of ICT skills such as navigating the Internet.<sup>13</sup> Because websites have been set up in numerous vernacular languages, barriers to knowledge have come down for villagers in remote parts of developing countries such as India and sub-Saharan Africa.<sup>14</sup> For this reason, ICTs are increasingly used for life-long learning in continuing education programs as well as re-integrating unemployed people into the workforce.<sup>15</sup>

### **ICTs Break Barriers to Participation**

Internet discussion groups throughout Africa and the developing world contribute to creation of vibrant public spheres that have had emancipatory benefits for hitherto voiceless groups. Examples include an online radio campaign against the caste system in Somalia, challenges to patriarchal injustices against women in Uganda, and the use of blogs in the Malala case in Pakistan that spotlighted the extent of inequality for girls in some eastern cultures (Malala is the 14-year-old schoolgirl who was shot in the head by a Taliban gunman for speaking up in favor of education for girls).<sup>16</sup>

In areas where the media are strictly controlled, the Internet has afforded various groups a forum for political mobilization and greater civic participation. This has been especially true in Somalia recently when Islamist extremists intimidated journalists through the threat of torture and murder.<sup>17</sup>

### **ICTs Break Barriers to Economic Opportunity**

ICTs require less initial capital investment than most other commercial and business ventures. A small tomato farmer in Ethiopia can find a reliable buyer of her produce through the Internet and thus start a more robust business.

As a result, ICTs lower the barrier to entry into the economy for millions of small entrepreneurs, producers, and women. ICTs make it possible to overcome the challenges of distance by vastly expanding markets for small entrepreneurs. The 2006 UNDP report included uplifting examples of vastly expanded horizons of human experience for the poorest and least

educated villagers. Examples include poor rural Indian women adopting e-mail as a cost effective alternative to telephone calls; Indonesian villagers using the Internet to sell handcrafted ornaments, some for as much as \$100 apiece; and small farmers in Sri Lanka raising their income 15-35% by using the Internet to market organically grown vegetables and fruits to European and other Asian customers.<sup>18</sup> But as the challenges of the digital divide illustrate, most of Africa's poor and illiterate masses cannot take full advantage of these opportunities. They are limited by what communication experts have called the "digital divide" and its constraints.

### **First and Second-level Digital Divides**

The digital divide refers to disparities in both access and patterns of use of the Internet between various SES groups within society.<sup>19</sup> Economists and social scientists alike note the detrimental effects of the digital divide for faster economic growth and social integration in the developing world, especially in sub-Saharan Africa.<sup>20</sup> Since the onset of the current "Information Age", two kinds of digital divides have been identified.

The first-level digital divide refers to disparities in *access* to the Internet between higher and lower SES groups in society. In earlier decades of Internet diffusion, this issue was acute even in the most advanced countries when segments of the population in the lower socio-economic classes had limited access to the World Wide Web.<sup>21</sup> The concern for more advanced nations (including the United States), has now shifted from issues of *access* to questions of the *nature of use* of the Internet. This is called the second-level digital divide. Many studies show that the social stratification identified in the first-level divide is largely kept intact in the second level divide in spite of appearances of equality as gauged from what is termed the "normalization hypothesis."<sup>22</sup> Through survey research in numerous contexts, experts have established that while better educated classes use the Internet for information seeking purposes that enable them to take advantage of opportunities for advancement in society, a majority of those in lower SES classes are unable to do so, instead only using the Internet for recreational and entertainment purposes only. Mere access thus fails to guarantee equality of economic opportunity for all segments of the population (Hargittai and Hinnant, 2008; Mossberger, et al., 2005). The problem for African economies — especially for those in the Horn of Africa — is that they are being constrained by the effects of both the first- and second-level digital divides. Our anticipatory scenario-building approach will consider how countries of the Greater Horn region may mitigate the effects of these barriers.

### **Regional Economic Integration and the Potential Role for Somalia**

International trade is assuming ever increasing importance in the global economy with its contribution to the global GDP set to rise to 50% by 2020 according to U.N. economists.<sup>23</sup> World Bank data indicates that Africa is the region least integrated into the global economy.<sup>24</sup> It is also the least internally integrated region economically in the world with intra-African trade accounting for only 10% of the continent's total trade. This contrasts sharply with intra-European trade at 77%, inter-ASEAN trade at 47%, inter-North American trade at 49%, and inter-Latin American and Caribbean trade at 34% (World Bank press release, 2010).

Following agreement on the Abuja Protocol of 1991, African heads of state agreed to establish several trading blocs as part of a long-term plan to integrate the continent economically as a whole by first integrating separate geographic regions.<sup>25</sup> The Abuja Protocol set a specific timeline for achieving full African economic integration by 2034. Important intermediate goals to be realized along the way include: (1) the creation of regional trading blocs by 1999; (2) strengthening Regional Economic Community (REC) coordination and harmonization by 2007; (3) the establishment of free trade areas and customs unions within each REC by 2017; (4) the establishment of a continental common market by 2023; (5) the establishment of a continental economic and monetary union by 2028; and (6) the attainment of a full and functioning African Economic Community with a single currency and the free flow of goods and services among all African states. Of all the African regional trading blocs, IGAD (of the Horn of Africa) represents the least developed region with members making no effort at integration whatsoever.

IGAD's counterparts among African trading blocs such as the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), Economic Community of West African States (ECOWAS) and Southern African Development Community (SADC) have all taken strident steps towards meeting the goals of the Abuja economic integration timetable. All these organizations have reached agreements establishing their blocs as trading partners and economic entities and are already functioning as free trade areas. Most have established customs unions to facilitate the free flow of goods and services among member states. With the exception of COMESA, all have either ratified or have made substantial progress towards establishing a common market. All have also scheduled specific dates within the next 2-5 years to achieve full economic and monetary union.

By contrast, IGAD members have yet to take a single step toward economic integration. Clearly, the long history of wars and civil wars in the region has precluded all chances for progress toward economic integration in this region (see Table 1 under appendices); however, opportunities have now opened up, especially with the cessation of armed conflict in Somalia and a strong Pax-IGAD order seemingly established over the region. The fact that there has been little economic integration means that opportunities for faster development are greater here than elsewhere on the continent. Countries in the Horn of Africa represent a 237-million people market where each country has specific strengths that can make economic integration a bonanza for the entire region.

Ethiopia, Uganda, and South Sudan are landlocked countries with a combined population of 140 million. Diversification of their economies — which is a goal for most developing countries — will require external markets to grow and develop, while at the same time they can serve as next-door markets for their Horn of Africa neighbors. Uganda's economy can easily be integrated with South Sudan's where complimentary needs in energy, agricultural, fishing, and educational resources exist. Kenya offers more advanced infrastructure, especially in broadband and ICT utilization. In the East Africa region, Kenya was first to connect to international Internet backbone channels through a submarine fiber optic cable. Also, Kenya offers the most advanced ICT-based trading experience in the region. Somalia's natural resources and her people's entrepreneurial spirit remain untapped for sustained regional growth and economic development. One of Somalia's

advantages is that her citizens already make-up a significant part of the business communities in Kenya, Ethiopia, South Sudan, Djibouti, and Uganda. No other nationality in the region has such far flung business connections throughout the Horn of Africa as do Somalis.

Much informal trade is conducted by Somali merchants between and among all Horn of Africa states, with the possible exception of Eritrea. Because it is mostly informal trade, it is hard for any reliable assessments of the volume of such trade to be made, but it is estimated to run into at least a few billion dollars annually, excluding trade in the stimulant *Qat*.<sup>26</sup>

One of the most celebrated examples of Somali economic ingenuity and business acumen is the marvelous story of Nairobi's Eastleigh district where Somali businessmen and women, who fled the civil war in the 1990s, set up shop. As soon as the refugee merchants descended on Nairobi, they became a dominant commercial and business force that overshadowed all other commercial centers and activities in Kenya. Indeed, non-Somali economists have observed that Eastleigh's commercial reach has engulfed the entire East Africa region, not just Nairobi or Kenya:

Nairobi's Eastleigh estate has gained fame due to its rapid development into a commercial hub of East Africa sustained by much investment from the Somali Diaspora and trade networks stretching as far as China.<sup>27</sup>

Similar experiences born of Somali entrepreneurship are replicated in Kampala, Addis Ababa, Juba, Diredawa, Djibouti, and elsewhere in the Horn of Africa, albeit on a smaller scale than Eastleigh's. The extraordinary success of Somali entrepreneurship is attributable in large measure to Somali culture and the social structure of extended family relationships in the context of strong collectivist norms. Many successful commercial ventures and business models are voluntary cooperatives in which a dozen or so close family members pool resources in order to attain a competitive edge in an otherwise free capitalist market. One investigative report in a Kenyan newsweekly that attempted to find explanations of the mystery behind the fast and extraordinary business success of a refugee community concluded that:

Speculations remain rife over the source of wealth that fuels the economy in Eastleigh. To answer that, one has to understand the intricacies of the tightly-knit ethno-economic networks that characterize how Somalis do business and relate with each other. You can call it informal socialism, or even better, an ethnic cooperative.<sup>28</sup>

The article went on to note that Somali restaurant businesses alone have achieved such remarkable success that they have forever changed culinary tastes and habits of many native Kenyans as well as thousands of international travelers who visit Kenya as tourists. Somali cuisine reflects a multicultural mix of African, Italian, Arab, Turkish, and Indian influences which have made most travelers feel at home in Somali restaurants or other business establishments. This adaptability to change is another reason why Somalis are well-positioned to help integrate the economies of the Horn of Africa region.

A new dimension that Somali businesses have acquired over the last two decades that promises to facilitate cross-border business and trade is the use of ICTs.

### ICTs in Somalia and the New “Digital Generation”

Even during the darkest moments of Somalia’s civil war, many development experts marveled at Somalia’s advanced communication technology infrastructure, widely acknowledged as one of the most advanced in sub-Saharan Africa.<sup>29</sup> The inordinate rate of diffusion of ICTs was precipitated in large measure by the single most transformative element that has defined the Somali condition over the last few decades: the forced exodus of about a million of the country’s urbanites, including much of her technocratic and educated classes.

The resilience of the Somali economy in the face of total anarchy and the absence of a formal banking system have equally fascinated economists;<sup>30</sup> however, there is little mystery to this as it was accomplished through a combination of the survivalist grit of Somali culture and the use of modern communication technologies. Throughout the 35-year civil war, arguably the most successful businesses in Somalia have been ICT firms.<sup>31</sup>

*Telecom Somalia* was one of the first ICT companies in the country when it began operations in 1994. Soon, many more followed, including *Golis*, *Somtel*, *Hormuud*, and *Soma Phone*. All these businesses started as telecommunications companies offering mobile and landline telephone service. The Internet was late to arrive in Somalia, coming in 1999 at the height of the civil war. Nonetheless its rate of diffusion has been phenomenal: Within a year, 500,000 individuals, businesses, and educational institutions had signed up as subscribers.<sup>32</sup> This is phenomenal considering Somalia’s population is only 10 million.

Today, a broad range of Internet services are available to customers in 70% of Somalia’s territory. Most users access it through cyber cafes which can be found in bigger towns throughout the country. *Hormuud Telecom* was the first to introduce mobile internet in 2010 using General Packet Radio Service (GPRS) technology. The service was widely available but had limited capacity because of the lack of broadband Internet until November 2013. *Hormuud’s* GPRS-based service, for example, operated at a speed of 50 kilobytes per second, which was extremely slow. Service at most Internet cafes was equally slow, forcing clients to patronize the businesses in the evenings when download speeds were a tad faster. Business and educational institutions paid a premium for limited broadband services before the installation of fiber optic cable late in 2013. Rates for such service ranged from \$300 to \$600 per month — exorbitant prices for individuals by any standard. Even though three international backbone lines are laid undersea off its long coastline, Somalia got broadband Internet only in November 2013, thanks mainly to furious pirate activity offshore for decades. Most of Africa, however, did not have much of a head-start, as most countries with broadband capacity got connected to global backbone lines in 2010 when submarine fiber optic cable was laid in time for the World Cup tournament in South Africa.<sup>33</sup>

Despite this setback, Somalia has been home to a thriving e-Commerce sector that was greatly facilitated by the widely popular mobile money services used even in remote areas. The lack of a formal banking sector coupled with the perpetual security situation in much of the country have provided the motivation to invest in mobile money services popularly known as *Zaad*<sup>34</sup> at the expense of other life necessities. Instead of carrying cash, customers pay for all transactions electronically by mobile phone. They do this routinely either in person at a business establishment

or remotely from hundreds of miles away. This has greatly facilitated commercial activity and broadened the customer base for almost all businesses.

It is important to note that all *Zaad* (Mohamed, 2013) purchases are transacted in U.S. dollars. This increases the potential to conduct cross-border e-Commerce, which Somali merchants in Kenya, Uganda, Ethiopia, Djibouti, South Sudan, as well as Tanzania engage in freely.

### **The “Reverse Brain Drain” Effect**

The rise of China and India and the greater liberalization of sub-Saharan African economies have created new immigration trends in which former emigrants are returning home.<sup>35</sup> With peace returning to Somalia, this will be another advantage. Most of the million Somalis who emigrated as a result of the civil war settled in advanced countries of Western Europe, North America, and Australia, and smaller percentages settled in the Gulf States of Arabia. Regardless, however, a common feature among all Somali immigrant communities is the emphasis on education for their children.<sup>36</sup> This emphasis has paid off in the form of highly skilled Diaspora communities, great proportions of whom maintain residual allegiances to the “motherland.”

Consequently, Somalia is getting a new generation of Western-educated entrepreneurs who are not hampered by the constraints of first- or second-level digital divides as most non-diaspora Somalis are.<sup>37</sup> They have a role in mitigating the effects of the digital divide. Somalia stands to gain more from the relative size of the “reverse brain drain” effect that thousands of ICT-skilled entrepreneurs will exert on an otherwise unregulated economy. In much of Africa, ICT-related businesses are the biggest draws for skilled workers returning to more lucrative opportunities than they had in their adopted Western countries. According to the *Christian Science Monitor*, “African diaspora are beginning to return home, attracted by better opportunities, increasing political security, and a growing market buoyed by the spread of technology.”<sup>38</sup>

The other side of the immigration coin for Africa has had positive economic effect too, through remittances that are estimated to run into billions of dollars annually. According to World Bank data, sub-Saharan Africa received \$31 billion in remittances in 2012.<sup>39</sup> The UNDP estimated Somalia’s share of remittances in 2012 to be \$1.6 billion.<sup>40</sup> For a country of about 10 million people, that is higher in per capita terms than any other country in Africa.

This combination of capital and skill has spurred new investments in ICT infrastructure and software in Somalia. Dubai-based Somali entrepreneurs who hold a significant stake in the East African cell phone market are creating employment for young skilled workers in the ICT sector.<sup>41</sup> As a percentage of the total population, these new entrepreneurs with high computer and Internet literacy give Somalia the digital advantage over her neighbors in an integrated regional economy. Furthermore, the presence of vibrant Somali business communities in Kenya, Uganda, Ethiopia, South Sudan, and Djibouti has already laid the foundation for much informal trade in the Horn of Africa region. The return of thousands of business-minded entrepreneurs promises to cement the commercial bonds that will pull the economies of the Horn of Africa closer together.

### **Use of ICTs for Regional Economic Integration**

When Horn of Africa governments prepare to implement the African Union (AU) mandate to integrate their economies, ICTs will have to be deployed to facilitate trade. ICTs are more ubiquitous today in global trade and commercial transactions because of expanded pressures for faster and safer deliveries in a security-conscious world. Also, the greater flow of goods in a globalized environment that is more averse to corruption and tampering has necessitated the deployment of ICTs in all phases of the trading process from the port of origin to the final destination. Three main areas of ICT use can therefore be identified for trade efficiency and coordination: (1) the facilitation of efficient and transparent flow of goods through customs, (2) the management of transport logistics, and (3) the facilitation of intelligence and risk management.

#### **ICTs Facilitate the Efficient and Transparent Flow of Goods through Customs**

Automation of customs duties can greatly affect timeliness of deliveries, cost of goods, and reliability of service. Because customs perform too many important chores in the trade process (e.g., monitoring the cross-border flow of goods, ensuring compliance with existing government regulations, collecting taxes and applicable tariffs, and guarding against admitting illegal merchandise) their modernization through the deployment of ICTs is extremely critical for efficient and reliable cross-border commercial activity of any kind. Furthermore, this has become a requirement enshrined in the Kyoto Convention of 1999 on “Simplification and Harmonization of Customs Procedures.” All signatories of the agreement (WTO members) are required to implement the modernization of customs accordingly.<sup>42</sup>

#### **ICTs and Management of Transport Logistics**

Beyond customs, many other transportation-related activities can prove essential for moving goods, services, and money along trade routes. These include the management of transit freight operations, warehousing at seaports and airports, and harmonizing distribution and payment systems. Without the use of ICTs, each of these operations could lead to transit delays that contribute to dramatic cost increases. With delays, movement of merchandise can become subject to corruption, something that has saddled inter-African trade.<sup>43</sup> To measure the detrimental effect of delays in executing transportation logistics, the World Bank developed the Logistics Performance Index (LPI), a composite coefficient that measures “transport and information infrastructure, supply chain management, and trade facilitation capabilities at ports and airports.”<sup>44</sup> African countries get the lowest scores on the LPI index with the Horn of Africa countries at the very bottom.

#### **ICT as Facilitators of Intelligence and Risk Management**

All trade management regimes require enforcement of a host of other rules and regulations beyond the work of customs departments. These include seaworthiness of small boats that ferry cargo from docks, compliance with loading limits on transit trucks, and proper transportation of hazardous industrial goods, to name a few examples. In Africa, informal trading offers ample opportunities to circumvent any existing rules. But even in formal trading situations, unscrupulous

merchants may be tempted to mislead enforcement agencies by misrepresenting either the quantity or even the nature of the cargo being hauled. Inspections can therefore be cumbersome and time-consuming, thus rendering the entire process highly inefficient. In order to strike the right balance between security and efficiency, trading partners need to ensure the reliability of the information which they have to share about shipping consignments. One important condition for this is the standardization of information entry systems so that data on consignments are entered once arriving at the source and are thereby easily shared with and processed by trading partners. ICTs are the only vehicle for attaining the standardization of data entry among trading partners as well as improving and maintaining efficiency.

### **Conclusion**

Much of the post-colonial history of the Horn of Africa region is marked by bitter armed conflicts. All the states of the region except Kenya have seen long civil wars or wars against neighboring states. Indeed, the Somali-Ethiopian war of 1977-8 is considered the most brutal between any two independent African states.<sup>45</sup> The second most brutal was also fought in the region between Ethiopia and Eritrea.<sup>46</sup> The prolonged conflicts have precluded any chance of regional economic integration; however, inter-ethnic animosities which fueled the civil wars in the region show signs of subsiding. IGAD's mission is to secure peace through economic development and integration, as are the missions of common regional think tanks<sup>47</sup> who are betting that intertwined economic interests will induce peaceful coexistence.

Somalia's prospects for development look promising for the first time in a long while. The combination of regional peace and diffusion of ICTs bodes well for a better future for the entire Horn of Africa region. The Somali component of regional trade already shows remarkable elements of integration and its benefits. Much of the integration is informal, however, and although goods and services flow fairly freely across most borders in the region, transactions are not conducted in the context of formal trade agreements. Without formalization the countries of the Horn of Africa lose control over merchandize in a way that not only loses revenues, but could also pose health and security risks to the public in the region. With deployment of ICTs in cross-border commerce, this threat can easily and safely be averted on the path to greater regional integration and prosperity.

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## Appendix

Table 1

*Current status of African Regional Economic Communities*

<b>Regional Economic Community</b>	<b>Member Countries</b>	<b>Free Trade Area</b>	<b>Customs Union</b>	<b>Common Market</b>	<b>Economic &amp; monetary union</b>
<b>COMESA</b>	19	Established in 2000 with 14 participating countries	Launched in 2009 with a three year transition period	Not scheduled	Proposed for 2018
<b>EAC</b>	5	Established	Established	Agreement ratified in 2010; five-year transition	Scheduled for 2014
<b>ECOWAS</b>	15	Established	Not yet established	Initial steps taken re freedom of movement	Eventual merger of UEMOA and WAMZ envisaged
<b>SADC</b>	15	Established	due to be launched in 2010 but was postponed	Proposed for 2015	Proposed for 2016
<b>IGAD</b>	8	Not yet established	Not yet established	Not scheduled	Not scheduled

Source: United Nations Economic Commission for Africa, 2012

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# **Ethnographic Study to Understand the Culture of Technology Manufacturing in Ghana**

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## **Abstract**

Sub-Saharan African countries are characterized by low or absent technological growth. Scholars and the international community have endeavored to solve the long-standing problem, but none of these have produced the expected growth. While the rest of the world is advancing rapidly, Africa is noticeably lagging, even in comparison to other developing regions. It is apparent that previous international strategies cannot solve Africa's technological underdevelopment. This study argues that a solution to the problem depends on Africans, who must choose to want a solution and work towards it. An ethnographic study was therefore conducted to investigate the attitudes and worldview of the Ghanaian society towards technology underdevelopment. The study covers both the rural, traditional and urban, modern Ghana.

The study, among other things, revealed that the traditional sector is rich in inherited indigenous technology manufacturing, but the methods of production, and therefore, the technologies themselves, have been left undeveloped. The urban/rural divide inhibits positive cultural exchanges and knowledge sharing, thus, limiting the proliferation of indigenous technologies across the different cultures. Urban Ghana, where national policies are drawn, provides no framework for dialogue and participation for indigenous technology development.

*Keywords: Ghana, manufacturing of technology, technology development*

## **Introduction**

Since Ghana gained independence from Britain in 1957, successive government regimes and local businesses have endeavored to build an industrial base for national economic development and growth (Nkrumah, 1961; Kennedy, 1977). Those efforts were not successful despite the huge influx of capital-intensive investments, international aid, loans, and grants (Akubue, 2000; Lall & Pitrobelli, 2002; Aryeetey & Mensah, 2008). The persistent failures of the past cast doubt over the prospects of present and future efforts, as current efforts are still not based on a sound understanding of the Ghanaian people. For example, Ghana technology policy document that acknowledges the need to integrate development with the Ghanaian culture still focuses on the establishment of programmes and activities to develop technology that can compete with technology in the more industrialised West (MEST, 2010). When examining past failures and the basic technological needs of Ghana, it becomes apparent that modeling technological development on technological advances in the Western world may not benefit the local industries that sustain the Ghanaian economy.

This ethnographic study attempts to identify some of the factors that constrain technological development in developing countries. Using data from Ghana, the study will

extrapolate the outcome of future studies that may apply to the wider African region. The position of this study is that initiatives should re-focus from competing with the technologically advanced world towards developing technology for Ghana's national industries, so that businesses are assured of a firm technology base to support production. Ghanaians will seize the educational and job opportunities in expanded technological and engineering sectors and apply their education and skills to contribute meaningfully to national economic growth. According to Vergragt (2006), technology essentially involves the application of knowledge within cultural settings to address the material needs of the society. Therefore, technology should be specific to the culture it serves, even if it does not have a local origin.

### **Methodology**

The methodology adopted for this ethnographic study is to study selected areas of the Ghanaian culture to gain firsthand understanding of technological development. This is with the aim to identify and explain some of the factors that contribute to the present underdevelopment of technology in Ghana. The following section will present a brief narrative of the ethnography used in this study.

### **Ethnography**

Traditionally associated with cultural anthropology, the practice of ethnography requires the ethnographer to live among the population being studied, so that the ethnographer works with informants who are particularly knowledgeable in order to collect information (Bryman, 2012). Ethnographic fieldwork may last for extended periods of time, usually over a year, and sometimes much longer depending on the circumstances (Bryman, 2012), and other factors including communication issues between the ethnographer and informants (Appadurai, 1988).

As both a research methodology and a product of research (Marcus & Cushman, 1982), ethnography is difficult to define among scholars in various disciplines (Atkinson & Hammersley, 1994). Schensul (2005) summarises ethnography as research conducted in a natural setting, with intimate, face-to-face interaction between participants. However, emerging scrutiny among scholars of ethnography's traditional genre and procedural conventions demonstrates that Schensul's definition is oversimplified (Thomas, 1991). The progressing discourse, emerging from realist, postmodernist, and deconstructivist traditions, argues against the traditional branding of fieldwork as ethnography's most characterizing feature, arguing instead that ethnography and fieldwork are separable (Marcus & Cushman 1982; Sangren, 1988; Clifford, 1988; Thomas, 1991). Such arguments present ethnographic methodology as fluid and plastic, which could lead to the methodology's wider application beyond its traditional confines in anthropology (Wolcott, 1990). According to Atkinson and Hammersley (1994), definitions of ethnography stretch between two extremes points of view: those who view ethnography as a philosophical paradigm to which one makes a total commitment, and those who view ethnography as a method that one uses when appropriate. Marcus and Cushman (1982) demonstrate that the traditional presentation of ethnography is under fundamental revision, as influenced by the growing trend of epistemological

concerns. Cushman's work (1982) explores epistemological issues as an integral part of cultural analysis. Given these considerations, fieldwork remains distinctive of ethnography, as culture is studied and recorded through the firsthand accounts (Clifford, 1988; Wolcott, 1990). This is probably because the evidence I gathered is relayed by myself as a researcher. The ethnographer's role is to filter the accounts through his or her subjective experiences then represent the culture in an ostensibly objective point of view. What has been considered as "objective" is in fact contextual, and scholars argue that a people's culture is defined by the ethnographer (Sangren 1988). Due to ethnography's subjective nature, it requires cautious reporting.

### **Research Methods Employed**

The methods employed at the rural setting involved phenomenon observation and participant observation in addition to conversations, semi-structured interviews, and photography. The data collection focused on understanding how the rural community survives living away from modern amenities like running water, electricity, and transportation. In the urban settings, data collection involved meeting with professionals at government departments, institutions, and businesses. During the structured and semi-structured interviews, I used a digital voice recorder to record the interviews, which I later transcribed.

### **Summary Account of Ethnography in Ghana**

This subsection provides a brief account of the ethnography undertaken in Ghana. The fieldwork lasted two months, divided between two communities, one rural and one urban. Since I am Ghanaian, it could be argued that an ethnographic study was unnecessary, as I am already familiar with Ghanaian cultural tradition; however, it is extremely difficult to mitigate bias and conduct an independent study when the researcher is a member of the community under observation. In the effort to mitigate bias, in this case, I have attempted to take an outsider-observer's perspective. An outsider may find it easier to observe and identify the characteristics that answer the research intent. Being a Ghanaian, however, served as an advantage in certain cases, as I could more easily penetrate the rural communities; however, I did not receive that same reception from urban professionals. Clear social stratification existed within the rural communities; for example, the chief occupied the top of the hierarchy, and community members earned their position and respect by the size of their farm, number of cattle the family owned, and their and their families' general behaviour and conduct. The population comprised mainly children and the elderly. Most of the youth, without education or skills other than in agriculture, had emigrated into the towns and cities in search of better quality of life. As one of the community elders stated, "They [the young men] say they need job, they need to make money. We don't have any work here apart from farming, so they leave for the big towns."

The combined experience of the two rural-traditional and modernised communities provided useful experience for the research at hand. Data collected from professionals in the more modernised towns and cities provided perspective on the Ghanaian policy and development approach to technology. Interactions in both traditional and modernised social contexts provided

tangible bases for discussion to contribute to better understanding the research intent. The following section will present some salient findings from the fieldwork.

### **Results and Discussion**

From the narratives presented, I will attempt to uncover the Ghanaian perception towards the manufacturing of necessary technology. Policy issues, as understood through interviews taken in the cities with professionals, cast light on underdevelopment of technology in rural areas. The crude traditional production methods in the rural areas are not much different from those methods practiced in some individual homes in the cities; however, the cities dwellers have access to some modern amenities, such as electricity, tarred roads, and running water. The question becomes, how do city dwellers think differently from people in rural areas? While this question is difficult to answer directly, I observed that people, particularly from the second rural village, manufactured most of what the people needed, while the city dwellers purchase their goods from the market.

In the city, wealthier professionals seem to prefer technology imported from more industrialised nations (Kurzweil, 2007). However, technology is imported often without consideration of cultural variances between the country of export and the country of import (Hofstede 1984). As Ghanaian cities consume technology that the West produces, Ghana is denied the opportunity for technological growth from the technology available in the rural areas.

The study confirms the argument in existing literature that there is a clear divide between urban and the rural areas. As urban dwellers modernise, they align themselves with what could be considered a “Western” lifestyle. Young people from the impoverished rural areas migrate to urban areas, aspiring to a more modern lifestyle, which is one possible pull factor for urban migration, while older generations remain in their traditional rural home (Adepoju 2010). Sagasti (1992) describes a phenomenon he calls “cultural elongation,” when a previously colonised nation continues to follow its former coloniser’s patterns of administration, a process that promotes the agenda of imperialism, and as we’re now seeing, serves the global class system while ignoring indigenous, traditional cultural and economic systems, as in rural Ghana. As young people migrate to urban areas, traditional production methods are abandoned, which calls for concern. Ghana’s educational and research institutions almost solely support Westernised systems in their curricula, in another instance of “colonial elongation”. Often, traditional production technologies, which are mainly handcrafts, are not competitive on the global market, even though products such as textiles and shea butter are in demand globally.

One possible reason for colonial elongation is ethnic division, as each ethnic group defines its own geographic boundaries and orientation, creating a series of “mini-states”. This geographic and ethnic division came to light when I interacted in the two rural villages. The villages demonstrated strong internal bond within the communities, but distanced themselves from neighbouring tribes, even though one neighbouring tribe was the same, only at a different location. As a result of tribal divisions, each social group becomes too small to envision the need for more modern, enhanced methods of production. Small populations within tribes diminish demand, which would act as a catalyst to stimulate the community to higher production. Although one might

expect the Ghanaian government to operate above tribal divisions, so that the tribes have a point of unification, this was not the case. One respondent described how the Ghanaian population votes in its presidential election along tribal lines, an observation that calls for further investigation. Technological development must extend from Ghanaians, despite the extent of ethnic division.

How do Ghanaians see themselves with regards to technological development? I found that Ghanaians, both in rural and urban contexts, see themselves as technology users, but they understand themselves as having to rely on imported technology from the industrialised world, rather than making a national effort to develop technology manufacturing that coordinates with Ghanaian culture. This study found that Ghanaians consider themselves incapable of building their own technology base. I gathered this impression in semi-formal discussions held with Ghanaian engineering professionals working in academia and industry. They said that it is very difficult to access data as technology manufacturing is a guarded secret. Such a perception should however be counted as incorrect as artefacts found at the two villages were all manufactured by the locals with their crude technologies. Competition drives companies to guard technology manufacturing from others, even though the technological innovation is available and easily disseminated in this age of the Internet and information technology. Ghana needs to make the decision to develop technologically, and then set goals. The interviews suggest a Ghanaian attitude of looking internationally for solutions to its technological needs, which handicaps the development of Ghana's own technology industry. This assertion was derived from the interviews conducted with some respondents, as shown below.

In a conversation with a court judge on laws that promote manufacturing in Ghana, the judge responded:

Answer 10-3: Manufacturing needs the machines, but we do not have them; we would need investors to bring them into the country for the local manufacturing you are talking about to take place... I don't know of anything specifically for manufacturing or engineering. You see, it is when we have a case we research into the laws in that area. I haven't searched that line yet.

In a conversation with two customs officers about the kinds of imports into Ghana, they stated:

Answer 9-3: All kinds of machines, anything you can think of, from medical equipment to classroom teaching materials. We do not make anything in Ghana, you know. We import all our machines. I don't know what our universities are doing, our engineers can't do anything.

In a conversation with a director at a government ministry, when asked how the government promotes manufacturing, the respondent stated:

Answer 13-4: The emphasis here is to direct available funds to the agricultural sector... On the other hand if we get investors from the manufacturing sector, say, a manufacturing firm chooses to come and set up its manufacturing business here in Ghana, then that will help. Government is doing all it can to attract foreign investors into the country.

These responses from the professional group suggest a Ghanaian outlook that recognises the need for industrialisation for national economic growth, but lacks the confidence to develop a sustainable manufacturing base as the first step towards industrialisation. This may explain why the manufacturing sector records the lowest growth rate among all the sectors of the Ghanaian economy (Kolavali et al. 2011). No Ghanaian law could be found that makes provisions for manufacturing in the country, as came to light in an interview with a Driver and Vehicle Licensing Agency (DVLA) Regional Officer:

Question 8-1: What does your office require, as per the laws of Ghana, for an automobile to be deemed fit for registration?

Answer 8-1: When they bring in the car or any vehicle, we have a Customs Officer attached to this office, whose job is to verify that all the import duties have been paid. Based on the Customs' document, only can we commence the registration process to duly register a vehicle in Ghana.

Question 8-2: So does it mean that without the Customs' document of affirmation of import duties being paid, a vehicle cannot be registered?

Answer 8-2: No, if the car has no import papers to show, it can't be registered. By law, the Customs duty must be paid first.

The respondent suggested a contact with the Department for Customs who could clarify, and a visit to the Customs' Office confirmed the DVLA Regional Officer's statements. This suggests that there is no provision for technology manufacturing to take place in the country, as a car manufactured in Ghana cannot be registered.

Moreover, a shop owner revealed in a conversation that Ghanaians would prefer to use foreign products than buy locally made products. In conversation with a shop owner:

Question 16-2: Why do your customers prefer to use this U.S. made product instead of the locally available ones?

Answer 16-2: They complain about its natural odour, but it can be treated out. Don't mind them, that's not the reason; they just want to use something exotic. They think when they use a U.S. product, then they are getting part of the U.S. life, but they are only making the already rich Americans richer and we remain poorer.

The shop owner further stated that production in Ghana risked provoking anger among local politicians who are linked to foreign companies that monopolise the industry.

Question 16-3: But don't you also think that your customers want to use this U.S. product because it is better refined, but we don't produce such good qualities and varieties?

Answer 16-3: Even if you make it better locally, they will still want the U.S. brand. You don't know our people? If we want it, why don't we make it the way we want then? My young man, let me tell you the truth; it is very complex, it's not just what you see from the surface. Unfortunately, all these things have their politics as well. If you get into production, you will become a threat to the American company and they will work through your local politicians to stop you from taking away their market. I can't tell you all.

The shop owner's claims raise questions about the economic security of the nation as it appears to be controlled internally by international corporations. In an interview with a respondent working in a multinational company in Ghana, he stated that multinational companies use their monopoly of commodity production to stop the government from implementing any policy that will affect their profit margin. The companies directly control the government through threats to withdraw their products, the deprivation of which would make the politicians unpopular among the public. The government acquiesces to the companies' demands, so that it is unable to establish any control measures.

The respondent from the multinational company and shop owner's claims that foreign companies could sway local politicians to stop local businesses was very difficult to accept, until I met a young entrepreneur who had invested in the production of traditional soft drinks. This entrepreneur, who had no connection with the shop owner, provided strong grounds to attest the shop owner's claim. When speaking with this local drink producer about why he stopped production, he responded:

Answer 17-4: I think it was our fault; we went ...for certification. That was our mistake. The Officers told us to test the product on the market much longer to be sure of its success and return to them. Within that same week of our meeting them, they sent their taskforce to inspect all shops to remove all uncertified products. So they went and collected ours too...that is what has spoiled my business.

Upon further investigation of technology manufacturing, I deduced that qualified engineering and design staff was difficult to retain because of low patronage. Local businesses were not able to afford their fabricated machines and other products. The complex nature of this dynamic deserves much more analysis, in order to develop more appropriate channels, methods, and frameworks for technological development that is better integrated with Ghanaian culture.

### **Conclusion**

This ethnographic study of selected parts of rural and urban Ghana, undertaken in order to understand the country's social perception of technological development, attempts to better understand technological underdevelopment in Africa based on firsthand observation and accounts, rather than on speculation and assumption. My findings confirmed some of the existing theories for technological underdevelopment, especially of indigenous technologies, like ethnic divide and social seclusion. At the government policy level, technological development is not a major consideration, so much so that the law is used to limit promotion of manufacturing to discourage competition for imported technology. For example, only imported automobiles can be registered. With these findings in mind, this study concludes with a call for more consideration of manufacturing and indigenous technological development at the policy and educational levels, in order to create a future of hope for the coming generations.

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# Determinants of Farm and Non-Farm Family-Controlled Child Labor

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## Abstract

Ninety five percent of the child labor in Africa takes place in private households where children are controlled by their relatives. While this is a major problem, the literature provides little discussion on the determinants of this form of child labor. To fill this gap, I examine the determinants of farm and non-farm family-controlled child labor using data from the 2009 Ghana Time Use Survey. The findings indicate that school networks, the education level of the head of household, and religion play important roles in determining children's activities in both farm and non-farm work.

Keywords: *Family-controlled, child labor, logit*

## Introduction

This paper examines the determinants of farm and non-farm family-controlled child labor using the 2009 Ghana Time Use Survey. According to the United States Department of Labor, Sub-Saharan Africa made moderate advances to eliminate child labor in 2012.<sup>1</sup> While this is a laudable achievement, estimates from the International Labor Organization (ILO) indicate that the region still has the highest incidence of children's involvement in economic activity and lags behind other regions in the elimination of child labor. Poverty is widely provided as the reason for child labor's predominance in Africa. This is known in the literature as the "luxury axiom" (Basu & Van, 1998). Basu and Van (1998) provide a theoretical model to support their claim that low incomes force children into the labor market. The authors show that the market for child labor is characterized by binary equilibriums: one in which adult wages are low and children work, and the other in which adult wages are high and children do not work.

This paper focuses on family-controlled child labor, or situations in which children's labor is monitored and controlled by the children's close relatives including grandparents (Anvig 2001). This paper does not examine situations in which children's labor is controlled by their biological parents. The existence of family-controlled child labor has significant policy implications, because programs targeted towards eliminating child labor depend on understanding the causes of child labor. Therefore, it is important that we determine the causes of child labor so that appropriate policies can be directed towards eliminating the problem. I use the 2009 Ghana Time Use Survey to examine the determinants of farm and non-farm family-controlled child labor. Like many countries in Africa, Ghana has the most strenuous and dangerous forms of family-controlled child

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<sup>1</sup>According to the United States Department of Labor, a country made moderate advances in eliminating child labor if it made recommended initiatives and revisions in laws and regulations, coordination and enforcement, policies, and social programs to eliminate child labor.

labor (ILO, IPEC, 2003, 2012). Children are engaged in agriculture, fishing, and hazardous industries like mining and quarrying. The child labor law in Ghana conforms to international standards. The minimum age for employment is 15 years and applies to both the formal and informal sector. The law also prevents children younger than 18 years from engaging in hazardous activities.<sup>2</sup> I define child labor using responses to the following survey questions: 1. Did you do any work for pay, profit, family gain, or did you produce anything for barter or home use during the last 14 days? 2. Did you work for more than 20 hours per week, including domestic work?

I contribute to the literature by examining the determinants of child labor with a focus on family-controlled child labor. I first ran a pooled logit regression and included a dummy for children involved in farm activities. The results from the pooled regression show that the dummy variable for farm labor is positive and significant. Therefore, children involved in farming are more likely to be involved in child labor than those who are not involved in farming. I proceed to run separate regressions to examine the determinants of farm and non-farm child labor. I find that household wealth has a negative impact on farm child labor, which indicates that farm child labor is sensitive to changes in household wealth. The results also show that household wealth has no impact on non-farm family-controlled child labor. The findings also indicate that school networks, education level of the head of household, and religion play important roles in determining children's activities in both farm and non-farm work.

### **Literature Review**

Studies on child labor are based on household models in which household utility and income constraints determine the decisions of household members ((Basu, & Van 1998; Bonnet, 1993). These models show that the allocation of children's time is based on variables that include: child characteristics, parent characteristics, family composition, poverty, school characteristics, and region or location of household. The dataset used in this study provides information on the aforementioned variables, which helps to ensure that important causal factors are included in the regression and eliminates potential for bias. I summarize below the various characteristics that impact children's labor.

### **Child Characteristics**

Child characteristics include age, gender, and birth order. It is well established in the literature that child labor increases with age (Ray, 2000; Bhalotra and Heady, 2003). Although the results vary depending on the type of data as well as the definition of what constitutes child labor, the assumption is that older children are more productive and able to perform difficult tasks. The fact that child labor increases with age implies that earlier-born siblings are more likely to enter the labor market than later-born siblings. This notion is consistent with the literature on birth order effects. For example, when Emerson and Souza (2007) examined the impact of birth order on child

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<sup>2</sup> The Children's Act deems workplaces in mines, quarries, at sea, or in venues that expose children to immoral behavior as hazardous to children's health.

labor, they found that male and female first-borns are less likely to attend school and more likely to be involved in the labor market than their later-born siblings. The literature here reviewed provides mixed results on the impact of gender on child labor.

### **Poverty**

As noted in the introduction, poverty is usually regarded as the main cause of child labor, particularly in developing economies. Basu and Van (1998) provide a theoretical model of the child labor market that supports this notion. The authors find that the market for child labor is characterized by two equilibriums, one in which adult wages are low and children work, and the other in which adult wages are high and children do not work. A number of studies have provided empirical evidence to support this theory. For example, Dehejia and Gatti (2002) use a macro-level dataset from the ILO to show that the GDP per capita is negatively associated with child labor. Ray (2000) uses a micro-level dataset to provide empirical results that support the theoretical model by Basu and Van (1998). Patrinos, & Psacharopoulos, (1997) use data from Peru and Pakistan to test the hypothesized relationship between child labor and poverty, and their results indicate a positive relationship between child labor and poverty. However, some studies have provided empirical evidence that contradicts the positive relationship between poverty and child labor. Bhalotra and Heady (2003) challenge the idea that child labor takes place in poor households. The authors use survey data from Pakistan and Ghana to show that children in land-rich households are more likely to work than children from land-poor households.

### **Parent Characteristics**

Parent characteristics, which include education and marital status of the parent or head of household, also impact the determinants of child labor. It is widely accepted in the literature that lack or low education of the head of household has a negative relationship with child labor (Dehejia and Gatti, 2002; Patrinos, & Psacharopoulos, 1997). Educated parents are more likely to send children to school full-time than send them into the labor market. Patrinos, Lopez-Calva, and Bando (2005) demonstrate that the probability that a child will go to school increases with education level of the household head. Their results also indicate that the probability of the child's involvement in child labor decreases as the education level of the household head increases. The authors also found that the probability that a child will go to school rather than enter the labor market increases when the household head is married.

### **School Characteristics**

School characteristics include proximity to school as well as quality of the education system. According to Bonnet (1993), poor low school quality and low returns to schooling in many African countries partially explain why some parents consider work to be a better option for their children than school. In many rural areas in Africa, schools are located far away from communities and many children have to walk long distances to go to school. Parents, concerned about the safety of their children, are thus forced to take their children with them to the farms or send them to work

at closer locations. Although it is widely accepted that proximity to school can affect child labor, there is little empirical evidence to support this claim. For example, Kondylis and Manacorda (2010) show that improved proximity to school increases school attendance. However, the authors found that improved proximity to school has no impact on child labor.

### **Household Size**

Household size refers to the number of dependents in the household. The literature provides evidence that the higher the number of dependents in the household, the higher the probability of a child working. Psacharopoulos (1997) examines the impact that the number of siblings and activities of siblings have on schooling and child labor. The author finds that there is a positive effect between the number of siblings and the probability of involvement in the labor market. Canagarajah and Coulombe (1998) also find that families' area of residence and religious affiliation impact the determinants of child labor.

### **Data**

I use the 2009 Ghana Time Use Survey to examine the determinants of farm and non-farm family-controlled child labor. The survey is the first time use survey conducted by the Ghana Statistical Service in collaboration with the United Nations Commission for Africa. The survey consists of 4800 households and 10,742 individuals selected from a representative sample of both urban and rural areas. It provides information on the time spent by children and adults on all paid and unpaid activities. The survey also provides comprehensive information on household assets, expenditures, demographic characteristics, and households' use of social services including schools. I focus on family-controlled child labor, excluding children who are the biological offspring of the head of household or are otherwise related to the head of household. I have constructed this sample using responses to the survey question, "What is your relationship to the head of household?" I also categorize the data between children who are involved in farm activities and children who are involved in non-farm activities. I define child labor as children between the ages of 10 and 15 who:

- Worked for a wage, salary, commission, or any payment in kind, including paid domestic work  
And or
- Worked for more than 20 hours per week, including domestic work

I obtained information on each child's age, gender, parent characteristics, school enrollment, proximity to school, and household assets (type of dwelling, number of rooms, whether or not there is electricity, type of water, and farmland ownership). The household assets used include: radio, bicycle, television, refrigerator, motorcycle, car, land, source of water, source of electricity, cooking fuel, and house. Because the survey does not provide information on household income, I constructed a wealth index variable to proxy for income. I follow Filmer and Pritchett (1998; 1999) and construct a wealth index using principal component analysis.

The final sample consists of 1,381 children. I present descriptive statistics in Tables 1 and 2. Table 1 indicates that, on average, 35% of boys are involved in child labor compared to 22% of girls. What is disheartening is the fact that the statistics also show that about 60% of the children involved in child labor are reported as part of the labor market or among those who received paid work. I also find that child labor is higher in farm locations compared to non-farm locations. On average, 61% of child labor occurs in farm locations compared to 39% in non-farm locations. I run a two-sample t-test for the difference in the average values and find that the difference is significant at the 1% level of significance.

Table 2 shows mean values for additional variables included in the model. Age is measured in years, with the average age of 12.8 years. I expect the coefficient for age to be positive as is consistent with the trend that households' are more likely to send older children to the labor market. Descriptive statistics show that the average household size is 4. I expect the coefficient on household size to be positive—the larger the family, the more mouths to feed, and therefore the more children who are required to work for income. In terms of schooling, 78% of children are enrolled in school. On average, children walk 1.8 miles to school. I expect the coefficient for school enrollment to be negative as children enrolled in school are less likely to be in the labor market. I expect the coefficient on distance to school to be positive. The further away schools are, the less likely it is that children will be enrolled in school and the more likely it is that they will be engaged in work. In general, a smaller proportion of children involved in both farm and non-farm child labor are enrolled in school. Approximately 57% of those in farm child labor are enrolled in school compared to 63% for non-farm child labor. The descriptive statistics also show that for farm child labor, 42% of household heads have primary education, whereas for non-farm child labor, 47% of household heads have primary education.

### **Empirical Methodology**

In this paper, I examine the determinants of farm and non-farm family-controlled child labor. I use the empirical specification in equation 1.

$$Y_i = B_0 + B_1X_i + e_i \quad (1)$$

$Y_i$  is a dummy variable where 1 represents family-controlled child labor and 0 represents otherwise.  $X_i$  is a vector of variables for gender, age of child, school enrollment, proximity to school, household size, education of the household head, religion, and household wealth. Religion is a dummy variable where 1 indicates households that are Catholic or Protestant and 0 represents otherwise. Because the dependent variable takes the value of 0 and 1, using OLS will produce results that do not make sense because there is nothing in this regression to bind our estimates between 0 and 1. Instead, I use a logit regression to estimate the model in equation 1 and report marginal effects.

### **Results of Regression**

I first ran a pooled logit regression and included a dummy for children involved in farm activities. In this dummy variable, 1 represents children involved in farming and 0 represents

otherwise. I report the results of this regression in Table 3. Unlike linear regression models, the estimated coefficients from a logit regression do not give us the marginal impact of the explanatory variable on the dependent variable. Therefore, the results in Tables 3 and 4 are marginal effects estimated at mean values. The marginal effects give us the changes in the probability of a child involved in child labor as a result of a change in the explanatory variables.

The results from the pooled regression show that the dummy variable for farm labor is positive and significant. Children who are involved in farming are more likely to be involved in child labor than those who are not involved in farming. I proceed to run separate regressions to examine the determinants of farm and non-farm child labor. The first column in Table 4 shows results for farm family-controlled child labor, and the second column shows results for non-farm family-controlled child labor.

### **Household Wealth**

The results show that the coefficient of household wealth has a negative and statistically significant impact on farm child labor. An increase in household wealth decreases the probability that a family-controlled child will be involved in farm labor by 2%. This result confirms the luxury axiom postulated by Basu and Van (1998). Most of the children involved in farm work live in rural communities where households have little or no capacity of ensuring themselves from economic volatility so children's involvement in work is essential to ensuring the survival of the household.

### **Child Characteristics/Household Size**

The results indicate that an increase in the child's age increases the probability that the child will be involved in farm work by 5.3%. I find that family-controlled boys are, on average, 18% more likely to be involved in farm labor than girls. This result supports the findings of Canagarajah and Coulombe (1998), which state that girls are more likely to be involved in unpaid domestic work, which may not be included in the formal definition of child labor. The findings are similar for non-farm family-controlled child labor.

In contrast to the findings by Psacharopoulos (1997), I find that an additional member of the household decreases the probability that a family-controlled child will be involved in farm work by 0.3%. For non-farm child labor, having an additional member in the family increases the probability a child will be involved in work by 4.8%. Although child characteristics are important determinants of farm and non-farm child labor, it is important to distinguish between part-time and full-time work. However, the dataset does not provide me with the necessary information to undertake this analysis.

### **School Enrollment/Distance to School**

I find that school enrollment has no impact on farm child labor. I constructed the variable school enrollment from responses to the survey question, "Is child currently in school?" Although children may be enrolled in school, certain conditions may prevent them from actually attending school, and the variable school enrollment does not capture school attendance. Distance to school increases the probability that a family-controlled child will be involved in farm child labor by 4.2%.

Poor school networks, lack of textbooks, and lack of teachers may discourage schooling in rural communities. Similarly, the results show that distance to school increases the probability that a family-controlled child will be involved in non-farm child labor by 1.6%. I also integrated school enrollment with distance and the results indicate that the coefficient is negative and significant for both farm and non-farm labor. Children who are enrolled in school are less likely to be involved in both farm and non-farm child labor.

### **Parent Characteristics/Religious Affiliation**

Education level of the household head is statistically significant and has a negative impact for both farm and non-farm family-controlled child labor. As mentioned above, religion is a dummy variable where 1 represents households that are Catholic or Protestant and 0 represents otherwise. The results indicate that affiliation with a Catholic or Protestant religion decreases the probability that a family-controlled child will be involved in farm child labor by 1.8%. This can be explained by the fact that many higher quality primary schools are run by churches that provide educational support to households.

### **Conclusion**

In this essay, I use logistic regression to examine the determinants of farm and non-farm family-controlled child labor. I used the Ghana Time Use Survey data, which provides detailed information on time spent on paid and unpaid activities of both adults and children. The findings illuminate key differences between the determinants of farm and non-farm family-controlled child labor. I find that household wealth has a negative impact on farm child labor, which indicates that farm child labor is sensitive to changes in household wealth, while household wealth has no impact on non-farm family-controlled child labor. The results also indicate that, on average, older children are more likely to be involved in both farm and non-farm child labor than younger children. Therefore, government policies should be directed at reducing school dropout rates for older children. The findings also indicate that school networks play an important role in determining children's activities in both farm and non-farm work. The government should make budgetary allocations towards the construction of schools and school facilities to improve access to schools, particularly in rural communities where the majority of children are involved in farm child labor. The results also indicate that education of household head has a negative impact on both farm and non-farm family-controlled child labor. Policies should target the improvement of adult literacy rates and establish non-formal education programs to improve attitudes towards education, which will further improve the probability of children's engagement in schooling.

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## Appendices

Table 1

*Data Summary*

	<b>BOYS</b>		<b>GIRLS</b>	
	<b>FREQ</b>	<b>PERC.</b>	<b>FREQ</b>	<b>PERC</b>
<b>Child labor</b>	457	35%	237	22%
<b>Non-child labor</b>	848	65%	838	78%

Table 2

*Variable means*

<b>Variable</b>	<b>Farm</b>	<b>Non-farm</b>
<b>Age</b>	12.6	13.2
<b>Household Size</b>	4	3
<b>School enrollment</b>	57%	63%
<b>Distance to school</b>	1.9	1.6
<b>Education for head of household</b>	42%	47%

Table 3

*Pooled Logit regression. Dependent variable is child labor.*

<b>Marginal effects</b>	<b>Dependent variable: Child labor</b>	
<b>Dependent:</b>	dy/dx	p-value
<b>Child Characteristics</b>		
<i>Age</i>	0.015**	0.048
<i>Gender (Boy)</i>	0.039	0.073
<b>School</b>		
<i>Enrollment</i>	-0.047**	0.042
<i>Distance</i>	0.028***	0.003
<i>Enrollment*Distance</i>	-0.031**	0.045
<b>Household wealth</b>		
	-0.019**	0.032
<b>Farm</b>		
	0.137**	0.044
<b>Household size</b>		
	-0.018	0.073
<b>Edu household head</b>		
	-0.089**	0.031
<b>Religion</b>		
	-0.073	0.059
<b>No. of OBS</b>	1381	

Note: \*\* and \*\*\* indicate statistical significance at 5% and 1% respectively

Table 4

*Logit analysis. Dependent variable is child labor.*

<b>Marginal effects</b>	<b>Farm</b>		<b>Non-Farm</b>	
<b>Dependent:</b>	dy/dx	p-value	dy/dx	p-value
<b>Child labor</b>				
<b>Child Characteristics</b>				
<i>Age</i>	0.053***	0.002	0.037**	0.019
<i>Gender (Boy)</i>	0.182**	0.020	0.070**	0.042
<b>School</b>				
<i>Enrollment</i>	-0.038	0.225	-0.029	0.135
<i>Distance</i>	0.042**	0.047	0.016**	0.05
<i>Enrollment*Distance</i>	-0.017**	0.041	-0.023**	0.036
<b>Household wealth</b>				
<i>Household wealth</i>	-0.021**	0.042	-0.001	0.613
<b>Household size</b>				
<i>Household size</i>	-0.003**	0.05	0.048**	0.03
<b>Edu household head</b>				
<i>Edu household head</i>	-0.124**	0.041	-0.036***	0.000
<b>Religion</b>				
<i>Religion</i>	-0.018**	0.04	-0.052**	0.042

Note: \*\* and \*\*\* indicate statistical significance at 5% and 1% respectively

## Convalescent Serum Therapy as Rapid Advance Treatment for Ebola in West Africa

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### Abstract

The 2014 public health crisis in Guinea, Liberia, and Sierra Leone has brought Ebola Viral Disease (EVD) to everyone's attention. Discovered in 1976, this deadly disease infrequently struck in remote areas of Africa. This article will critically review the literature and describe the pathobiology, transmission, signs and symptoms, diagnosis, treatment, and prevention of EVD which, was predicted by the Centers for Disease Control to potentially infect 1.4 million persons in Liberia and Sierra Leone by January 2015 ("Questions and Answers", 2014). Thankfully this worst case scenario did not occur and we may be experiencing natural burn out of the outbreak along with the results of aggressive education and supportive treatment as in Sierra Leone. There is no established treatment for EVD despite successes in non-human models. The WHO endorsed Convalescent Blood Products ("Potential for use of..." 2014) after it showed promise in Democratic Republic of Congo. In 2014, American Ebola patients recovered after receiving Convalescent Serum Therapy (CST) with experimental therapies like Zmapp, TKM-Ebola, and Brincidofovir. We may have missed the window of opportunity to establish the efficacy of these potential therapies, which may have unprecedented implications for health status, healthcare infrastructure development in the future, and the economic viability of the sub-region for decades to come. Additionally, an endemic area will pose a threat to the rest of the world as a potential incubator/exporter of this dangerous viral illness.

*Keywords: Ebola virus disease, convalescent serum therapy, convalescent blood products, rapid advance treatment, super-spreaders, cultural burial practices, personal protective equipment, survivability, susceptibility, hemorrhagic fever, Ebola prevention and treatment implementation plan, Hastings Ebola Cocktail.*

### Introduction

Ebola Virus Disease (EVD) is a viral hemorrhagic fever caused by the Ebola virus (EBOV) (Breman et al., 1978). During the latest unprecedented outbreak in Sierra Leone, Liberia, and Guinea, initial mortality rates reached between 55 and 70%, with no well-established treatments yet found for EVD. While numerous in vitro systems and animal models have led to effective treatments in non-human primate models, no in vitro systems have been

systematically tested in humans nor are expected to be available to impact the current epidemic (Ansari, 2014).

The main purpose of this review is to present an argument for the usefulness of Convalescent Serum Therapy (CST) as a Rapid Advance Treatment (RAT), both to reduce mortality rates and also to gain the psychological advantage as more transmission deterrent strategies are deployed beyond the standard Quarantine, Isolation, and Case Finding public health tools. We will review CST and compare it to other experimental and routine therapies that were touted at the start of the epidemic in West Africa about 12 months ago (2014) but have since been unavailable to diminish morbidity and mortality (Ansari, 2014).

We will start by reviewing EVD demographics, biology, pathophysiology, clinical presentation, diagnosis, and predilection for the immune system. The review will also identify individuals who are most at risk, EVD's transmission mechanisms, and available methods for prevention of transmission. The article will also discuss benefits of surveillance, early warning, the fear of endemic EVD, and how these factors influence the socio-developmental trajectory of the West African sub-region.

### **Ebola Virus Disease and Human Development**

The West African Ebola epidemic's short-term socioeconomic impact and long-term effect on human development will take some time to fully realize. It is clear, however, based on the scale of the current outbreak, that the economies of the most affected countries, Sierra Leone, Liberia, and Guinea, will bear the aftermath of this epidemic for a long time to come. The World Bank Group recently completed forecasts of economic impacts on the three most affected countries and on the West African region (2014). These conservative forecasts focus on core economic activity but do not account for long-term impacts generated by mortality, failure to treat other health conditions due to aversion behavior and lack of supply capacity, school closings and dropouts, and other shocks to livelihood. Nonetheless, in the short term, this forecast estimates the forgone output for these three countries to be approximately US\$359 million in 2013 prices: 2.1 percentage points (pp) drop in gross domestic product (GDP) for Guinea, 3.4 pp drop in GDP for Liberia, and 3.3 pp drop in GDP for Sierra Leone. These very significant numbers represent a drop of anywhere from a third to half of economic growth rates for these countries (World Bank Group, 2015).

The long-term outlook is assumed since it is unclear whether the epidemic can be completely extinguished (the "zero cases" scenario) or whether it will ultimately stabilize in an endemic low-intensity mode. These two scenarios bear very dire prospects for long-term development in the affected countries. With a combined GDP of \$13.1 billion in 2013, the worst-case impact predictions forecast over \$9 billion in loss, even if the disease is rapidly contained (Holtz, 2014). According to the World Bank 2014 Ebola economic report, which considers both "low Ebola" and "high Ebola" scenarios, the long-term impact on development could be crippling to countries already devastated by war and entrenched poverty.

Ultimately the effect of this epidemic on quality of life is just as important as the direct effects on the economies of these countries and of the region. The economic effects, whether bearing directly on economic activity or indirectly on development, will negatively manifest in human quality of life, including the people's health status. By focusing on the human impact, we can better galvanize action that is relevant both for Ebola outbreaks as well as post-Ebola recovery. Therapies that cost-effectively improve survivability, such as CST, are particularly important in this respect. In the post-Ebola era, it will be of particular importance to establish empowering grassroots community health systems on a community-by-community basis.

### **Etiology of Ebola Virus Disease**

EVD is a viral hemorrhagic fever that can be abrupt, severe, and fatal in humans. It also infects non-human primates like monkeys, gorillas, and chimpanzees. The Ebola virus is part of the family Filovirida and genus Ebolavirus. Its molecular structure is that of an enveloped, negative sense Ribonucleic acid (RNA), 1200 nanometers long, that codes for several proteins that function in its life cycle and aid in its pathogenesis (Ansari, 2014). EVD was first isolated during an outbreak in 1976 in the Democratic Republic of Congo (DRC), near the Ebola River. Outbreaks have been relatively sporadic and short-lived, killing virtually all who are infected and burning out quickly. In fact, there was a minor outbreak in DRC concurrent with, but separate and distinct from, the West African outbreak (Maganga et al., 2014).

To date, five subspecies of Ebola virus have been described: the Zaire, Sudan, Tai Forest, Bundibugyo, and Reston viruses. Reston has not caused clinical disease in humans and was isolated in infected cynomolgous monkeys from the Philippines (Ansari, 2014). Ebola's natural reservoir is not yet known with any certainty. It is thought to reside in the fruit bat or some form of zoonotic illness (Leroy et al., 2005). This raises the interesting question of whether EVD is transmitted by wild game, known locally as "bush meat," that is consumed in some of the affected areas ("Facts about Bushmeat and Ebola," 2014).

It is not yet known how the EVD arrived in West Africa. The most common hypothesis is that patient zero, a young boy in Guinea who has since died along with his entire family, contracted the virus through direct contact with an infected animal (Funk & Piot, 2014). However, this hypothesis has not been historically substantiated. EVD invades human tissues and cells by entering through breaks in the skin and mucus membranes when a person is exposed to body fluids from an infected individual. Person-to-person transmission of EVD occurs via contact with an infected person's blood or secretions, including urine, saliva, feces, vomitus, and semen. Also, exposure to objects like needles that are contaminated with infected secretions can cause transmission by needle-sticks, whether inadvertent as in the case of healthcare and laboratory workers, or by needle and syringe re-use as the result of improper sterilization techniques (Breman & Piot, 1976). Poor barrier protective practices in health care settings can also result in EVD contraction. This includes not adequately wearing Personal Protective Equipment (PPE) like masks, gowns, or gloves, and improper disposal of contaminated instruments.

Although EVD's pathobiology is not well understood, it is known that the virus disables the immune system, "allowing for the uncontrolled replication of Ebolaviruses" (Ansari, 2015). The initial symptoms presentation complex may include fever (>38.6 C or 101.5 F), headache, joint aches, muscle aches, weakness, diarrhea, vomiting, abdominal pain, and anorexia. In fact, this initial symptom complex is almost identical in two geographically distinct cohorts of patients, one in Hastings, Sierra Leone who presented with fatigue, anorexia, fever, vomiting, nausea, diarrhea, muscle pains, joint pains, and headaches (Ansumana et al., 2014), and one in Boende Town, DRC who presented with fatigue, anorexia, fever, vomiting, nausea, diarrhea, muscle pains, and headaches (Maganga et al., 2014).

While the extremes of the incubation period last from two to twenty-one days, a typical incubation period lasts eight to ten days. Early symptoms are usually the ones typified above, but can also include unexplained bleeding or bruising, rash, conjunctival injection, hiccups, cough, sore throat, chest pain, dyspnea, dysphagia, and life-threatening hemorrhage. Many of these also tend to be late complications. Early diagnosis is difficult because symptoms are non-specific, which presents a significant challenge, as potentially life-saving hospital supportive treatment does not usually occur until later in disease progression. Best practices include immediate isolation of patients who present early symptoms and are at risk for EVD and notification of public health professionals for immediate point of care testing in the field (Ebola Diagnosis, 2015). Early supportive treatment such as treatment with Intravenous fluids (IVF), maintenance of oxygenation and blood pressure, and treatment of other infections, increases the chance of survival as has been demonstrated during this epidemic (Ansumana, et al., 2015).

Culturally distinct burial practices that include touching the remains of a loved one may have contributed significantly to spread of the disease and have emerged as a distinct risk factor for disease transmission and increased prevalence in affected communities (Ebola Situation Report, 2015). Both the Central African and West African regions share this distinct risk factor for transmission of the virus (Maganga et al., 2014). It has been reported that 60% of EVD transmission cases in Guinea were linked to funerals that involve close contact with corpses (Chan, 2014). More medical anthropology research will need to be undertaken to understand the actual mechanism and implications of this hypothesis. There is no current understanding or general agreement on what these so-called cultural burial practices involve.

As expected, family, friends, health care personnel, and aides are at greatest risk as they perform direct patient care and clean up infected bodily fluids. Other stakeholders most concerned about the effects of this disease include people living in epidemic areas, international staff working and living in affected areas, airline personnel, travelers, staff of Governmental and Non-Governmental Agencies (NGOs) such as the Red Cross and Médecins Sans Frontières (MSF), and international agencies like the United Nations and the World Health Organization (WHO). Current thinking and published literature on susceptibility and survivability are primarily based in the study of basic science on molecular genetic analysis of so-called transcriptomes and kinomes (Ansari, 2014). These are genetic epitopes that are thought to naturally expose Ebola victims to either improved or weakened survival rates There is anecdotal

indication that sociopolitical and community factors, including but not limited to poor community health infrastructure and poor governance that cannot completely prevent at-risk burial practices, also expose certain groups of people to greater risk (Ebola Situation Report, 2015).

### **Convalescent Serum Therapy in Ebola Patient Management**

Given the dearth of therapies available to treat this devastating viral illness, the World Health Organization (WHO) has released a position statement supporting the use of Convalescent Blood products (CBP) to treat EVD in this outbreak (Blood Regulators Network, 2014). There is evidence to suggest a significant mortality benefit with the use of convalescent whole blood, which was first described in the Kikwit, DRC outbreak in 1995, when a seven out of eight survival benefit was demonstrated in a small study. However, the epidemic ended before a well-designed clinical trial could begin (Muyembe-Tafum et al., 1999). Convalescent serum is defined as a blood product devoid of red blood cells and clotting factors that contains Immunoglobulins IgM and IgG obtained from someone who has recuperated from a particular infection, in this case EVD. Convalescent serum therapy is the use of this serum to treat a person with the same disease. Several studies on CST treatment methodology are well established in the treatment of other viral hemorrhagic fevers such as Junin virus hemorrhagic fever in Argentina (Erina et al., 2008; Maiztegui, & De Damilano, 1979). Lassa passive immune therapy was also used successfully in five well-documented cases in Nigeria in 1970, in which four out of five patients recovered and only one was considered to have had an adverse reaction (Monath & Casals, 1975). Pooled convalescent serum therapy was implemented in the treatment of Lassa fever in Lofa County, Liberia in 1986; early data showed some benefit but unfortunately the trial was terminated prematurely due to an armed insurgency at the time (Frame, 1990). In addition, other small cohorts of patients treated in other studies using convalescent serum showed improvement that was attributed to the serum (Frame & Verbrugge, 1984; Leifer et al., 1970). According to media reports, convalescent blood product (CBP) has been used in 11 recorded cases in the Western hemisphere during the current EVD outbreak (Yahoo Finance, 2014). All of these patients recovered without adverse outcomes in the short term. However, they also received other experimental therapies alongside CBP like Zmapp, TKM-Ebola, and Brincidofovir; thus the dispositive factor in their recovery remains unclear.

Given these positive examples of CBP use, we will perform a comparative review of the use of CBP versus other experimental and routine therapies, and then comment on the potential usefulness of CBP in future potential epidemics in the region and how CBP might impact healthcare infrastructure development and economic independence and viability for decades to come. Multiple candidates have been proposed and are under examination for the treatment of Ebola. These candidates fall largely into the categories of blood therapies, drug therapies, and vaccines (Table 1). Unfortunately, none of these candidate therapies have been deployed in the affected countries to the extent necessary to make a difference in the current epidemic. No doubt the reasons for this unfortunate situation will be under debate in the literature and lay press for years to come.

As Table 1 illustrates, blood therapies appear to be the most accessible, affordable, and easy to deploy by the affected countries independent of external aid. In contrast, drug therapies and vaccines are out of reach for these resource-strapped countries, at least for the near future.

Table 1  
*Treatment Options for Ebola Virus Disease (EVD)*

Treatment Type	Overview
<b>Blood Therapies</b>	<p>Blood trials were successfully used in the Kikwit, DRC outbreak with reduction of case fatality rate (CFR) from 80% to 12.5%, but only in 8 patients. Limited whole blood trials in Sierra Leone also anecdotally reported 12.5% CFR with whole blood use (Samba A., 2015). Serum treatments are standard in Argentina for treatment of the Junin virus or Argentine hemorrhagic fever (AHF), reducing mortality rates to less than 1% when administered within a week of infection (Singh &amp; Ruzek, 2014).</p> <ul style="list-style-type: none"> <li>• Natural and affordable resource, thus less costly to the community</li> <li>• Reduced complexity in donor-to-recipient compatibility and donors can donate up to twice each week</li> <li>• Requires considerable logistical expertise to avoid mislabeling and mismatching and to ensure proper storage</li> </ul>
<b>Drug Therapies</b>	<p>Drug therapies include the commonly known drug Zmapp, which was used to treat missionaries Kent Brantly and Nancy Writebol. Other similar drugs include Zmab and Favipiravir.</p> <ul style="list-style-type: none"> <li>• High research and production costs may not be affordable for most in poor countries.</li> <li>• Require cold storage, another challenge for these countries</li> </ul>
<b>Vaccines</b>	<p>These will require lots of testing before approval. Also, vaccines can be challenging to develop when breakouts do not last long enough for large-scale tests to be conducted.</p>
<b>Other: "Hastings Ebola Cocktail" (HEC)</b>	<p>The Hastings Ebola Cocktail was used to treat 518 patients, resulting in 24% CFR. It is a widely available and affordable cocktail of IV fluids, antibiotics, antimalarial and nutritional supplements developed by Sierra Leonean physicians. The protocol involves a large number of components, thus unavailability of any constituent may undermine the integrity and potency of the entire protocol.</p>

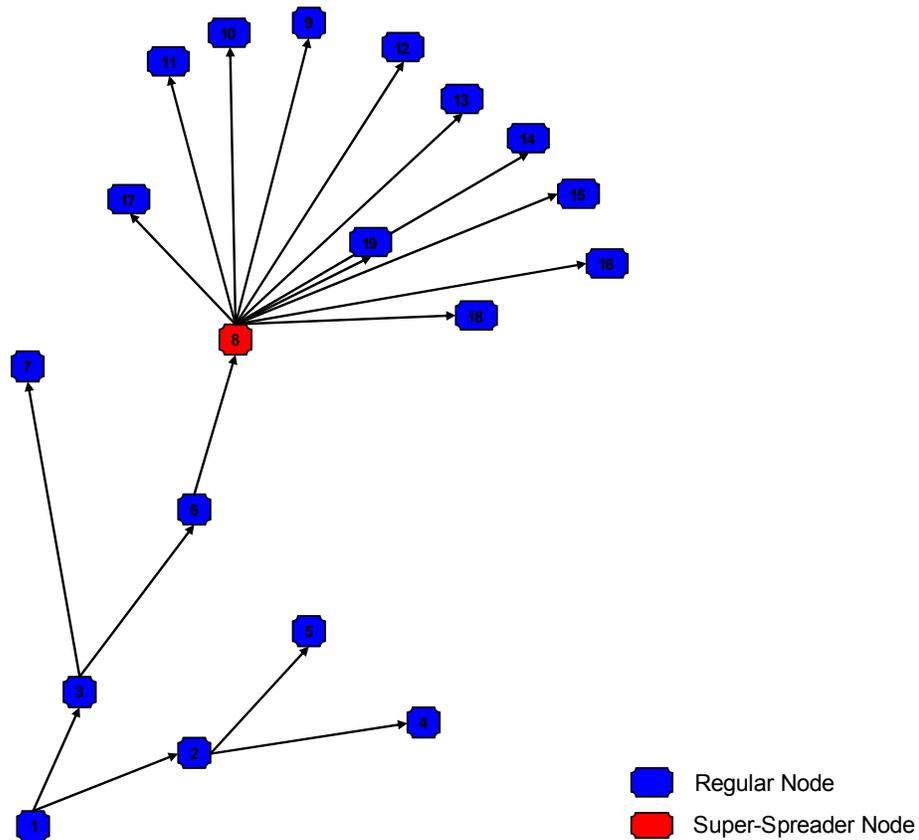
Therefore, it would be appropriate for these countries to devise an Ebola Prevention and Treatment Implementation Plan (EPTIP) that administers blood therapies as a significant plan of action, in conjunction with the prevention, containment, and modification of traditional burial practices.

Due to the highly contagious nature of the disease, EVD patients, and often their family members, are quarantined, while healthcare workers are required to wear personal protective equipment (Brodwin, 2014). Other safety precautions include limiting the analysis of EVD patients' blood in clinical care non-virus isolation methods like reverse transcriptase polymerase chain reaction (RT-PCR), antigen-capture enzyme-linked immunoabsorbent assay (ELISA), and IgM ELISA, coupled with inactivation techniques done in mobile laboratory Point of Care Testing (POCT) under appropriate biosafety conditions (Towner et al., 2004). Given the initial efficacy in the use of these techniques to limit spread and thus total mortality, some experts argue that more attention should be focused on primary prevention, early detection, and containment techniques, over design and discovery of direct treatment modalities that are currently unavailable and may or may not prove to be effective in the long term. While this may have been a successful strategy in limiting total mortality of the disease during small-scale epidemics in remote Central African regions that were already isolated (Maganga et al., 2014), it has not been systematically applied in the West African epidemic where mortality rates have remained high ("Ebola Situation Report," 2015). CST could significantly help in large-scale epidemics like the one in the West African sub-region, where robust cross-border mixing of populations, significant urbanization, and the relative ease of travel to urban areas make the quick isolation and quarantine of Ebola patients far more challenging. CST, in conjunction with" an infection control method, has been recommended in the treatment of viral hemorrhagic fevers (Ippolito et al., 2012).

### **Susceptibility and Survivability**

Analysis of the rate of spread of the epidemic is based on an estimation of the basic reproduction number ( $R_0$ ), which is the average number of secondary cases that arise when one primary case is introduced into an uninfected population. When  $R_0$  is greater than 1, infection may spread in the population, and the rate of spread increases with increasingly high values of  $R_0$ . After the early phase of exponential growth in case numbers, once infection has become established, the number of people still at risk declines, so the reproduction number falls from its maximum value of  $R_0$  to a smaller, net reproduction number,  $R_t$ . When  $R_t$  falls below 1, infection cannot be sustained. Estimates of  $R_0$  and  $R_t$  help in evaluating the magnitude of the effort required to control the disease, the way in which transmission rates have fluctuated through time, and the effectiveness of control measures as they are implemented (WHO Ebola Response Team, 2014). The detailed dynamics of Ebola, like any other infectious disease, can be investigated through the use of Transmission Network Analysis to understand the actual mechanisms of spread. Particularly important is the role of a small percentage of super-spreaders who account for an unusually high percentage of disease transmissions (Smith, 2015; Yu-Hsiang et al., 2014).

The case of one herbal healer who reportedly infected over 800—with over 360 of those dying—illustrates the super-spreader phenomenon in the West African Ebola epidemic of 2014 (Menezes, 2014). Through analysis of these super-spreaders, a stronger, more effective response to the disease could have been launched earlier. Analyses have revealed that unsafe burial practices and contact with infectious individuals without adequate personal protective gear are likely cataclysmic mechanisms of Ebola spread. The main driver of communal susceptibility, from a policy perspective, is early reporting and effective quarantine actions, coupled with adequate treatment by the affected communities. A related study of the efficacy of CST or Immune Serum Treatment of Junín virus-infected marmosets was found to reduce mortality from 100% to 25% (Avila, 1987).



*Figure 1.* Epidemic Transmission Network Simulation illustrating the super-spreader phenomenon

We must integrate lessons learned from the current Ebola outbreak into a long-term epidemic vigilance system, not only to prevent and treat Ebola, but also to treat and prevent a wide range of communicable diseases that may emerge in the future. Above all, we want to emphasize the role that poverty and mistrust of governmental authority have played in deterring quarantine orders, contact tracing, and public health education. Without the voluntary community support and compliance that we have seen during this Ebola outbreak, governmental quarantine edicts can have

little to no influence in combating the spread of any communicable disease and such edicts may hamper attempts to reduce susceptibility and spread. Instead, governance should create an environment of community empowerment and shared sacrifice. A sense of common destiny underpins community consent to the challenging measures that are necessary to protect an entire community and ensure that future outbreaks are more easily controlled.

Analysis of the epidemic spread in West Africa also offers lessons for cross-border epidemic control. Ebola spread from Guinea and then into Liberia and Sierra Leone has followed a somewhat expected trend. Further spread into Nigeria, Mali, and even Senegal is unsurprising. However, the case of Ivory Coast, a country that shares a border with Liberia's Nimba County and yet reports zero cases of Ebola, is quite significant (Reuters, 2014). Two likely reasons for the difference are effective border vigilance and quick and thorough education of Ivory Coast's population to the risks and precautions of the Ebola threat. That said, the significance of Ivory Coast experiencing "traditional" Ebola versus the more recent West African variety is unknown. The devastating speed of the 2014 Ebola spread emphasizes the need for better cross-border cooperation and vigilance in the detection and containment of likely future outbreaks. Most of the border communities have long and deep historical ties that have been disrupted to varying degrees by colonial borders and more recently by war. These cross-border ties must be revitalized so that they become the basis for early warning communication systems.

Air transportation has also served as a medium for the Ebola spread, as was the case in the transmission of Ebola into Nigeria and the United States. The challenge with air travel is the size, complexity, and volume of the people flow and transportation network. Many airports are already bogged down with security checks for outbound flights; additional measures for inbound flights may prove to be too challenging to handle. Low cost, unobtrusive, and long-range temperature monitoring devices such as those deployed in Chinese airports in the wake of the SARS outbreak are one potential strategy for West African airports.

While it is difficult to estimate the economic impact of the Ebola outbreak on the most affected countries, there is no doubt that impact on economic activity has been significant, with schools closures and severe restrictions on travel and commerce. While the goal of "getting to zero," as the slogan of a Sierra Leone public health campaign proclaims, is ideal, realistic planning must also consider the possibility that certain areas may control the virus but never quite eliminate it. In the scenario of locally endemic Ebola outbreaks, societal adjustments would create a state of permanent vigilance, which would then create severe socioeconomic impact, resulting in yet another blow to development in these countries. The threat of an EVD flare-up would not only affect the countries themselves, but also put all of the countries in the region, as well as outside the region, at risk. This nightmare scenario would call for a truly international response, requiring mutual cooperation with the affected countries and communities still in the lead. From the consideration of survivability, there is still no definitive cure for Ebola, but CST, when serum from survivors is transfused into current sufferers, has shown some promise.

In light of this challenging situation, CST seems to be an obvious low-cost and high impact approach, especially for resource-strapped countries in West Africa. CST can serve as an ideal

Rapid Advance Therapy (RAT) to quickly quell resurgent EVD in impoverished hotspots in the future. The extraction, storage, and transfusion of serum is now a basic medical procedure that can be safely administered practically anywhere in the world, and it does not rely on complex and expensive technologies or pharmaceutical products. The areas in West Africa most affected by the Ebola epidemic, particularly Sierra Leone and Liberia, are now just recovering from resource wars that have wreaked serious havoc on the fabric of these communities.

Even without considering that many of these communities are war-torn, there are the perennial problems of medical personnel and supply shortages and chronic underfunding of the health systems in these countries. These facts were manifest in the ineffectual and delayed responses to Ebola in Sierra Leone, Liberia, and Guinea. The conclusion therefore is that, in light of the governance vacuum from the capital cities of the region, local communities are now required to develop and implement grassroots community health programs to prioritize and use available resources at their disposal for addressing urgent needs of the people.

### **CST Supply and Community Integration**

The advantage of CST lies in the fact that people who have survived the disease are gifted with curative powers. The blood plasma or serum preparation process involves spinning a tube of fresh blood containing an anticoagulant in a centrifuge until the blood cells separate and fall to the bottom of the tube. The blood plasma is then poured or drawn off. Plasma donation can be safely done much more often, up to three times a week, in contrast to whole blood donation that typically requires an eight-week period between donations.

Fortunately, CST can be designed, developed, maintained, owned, and controlled by the poor communities independently, as opposed to the more expensive therapies that require a large financial and technical infrastructure to deploy. In a multi-faceted grassroots Ebola response program, it is imperative that we integrate Ebola survivors into the medical care system as community groups to donate plasma for CST for current Ebola sufferers. In such a bottom-up structure, the engendered reciprocity and trust will likely contribute significantly to the strengthening of the community fabric in communities that have been plagued by entrenched poverty, poor health, poor governance, and deep mistrust of their governments as well as the international community.

### **Conclusion**

We believe therefore that CST should be developed as a Rapid Advance Therapy (RAT) to quickly quell resurgent EVD in impoverished hotspots around the world, given that CST is the only therapy that can be designed, developed, maintained, owned, and controlled by resource-strapped countries. This is because convalescent serum can be considered as a natural resource and is accessible through survivor engagement and support, setup and maintenance of plasma banks, in-depth training of personnel, and standard aggressive hospital treatment, all of which can be accomplished within the resource structures of impoverished countries.

Conversely, other experimental EVD therapies are still not fully tested and are too expensive, requiring massive financial investments, capital expenditures for basic research facilities and support infrastructure, and expertise unavailable to these impoverished countries, leaving them dependent on wealthy international donor groups.

A strong containment strategy couples CST Rapid Advance Therapy (RAT) with early EVD outbreak detection and prevention, which is dependent on a grassroots health infrastructure. In the absence of this containment strategy, the future for sustained socioeconomic development in the West African region is bleak. This recognition is tied to the idea of “getting to zero”, but is punctuated by a nightmare scenario of not quite “getting to zero”, creating economic chaos and “lost decades” to come and a perpetually “contaminated” region that diaspora and expatriate tourist elements might flee from.

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# **Examining the Outcomes of the Balanced Scorecard (BSC) as an Integral Tool of Public Sector: Reform in Selected Sectors of the Oromia Regional Government**

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## **Abstract**

Over the last two decades Ethiopia has been actively engaged in reforming its public sector in an attempt to make it more responsive, transparent, flexible, and compatible with the demand of its public and its constituencies to ensure good governance. Nevertheless, despite repeated comprehensive reform programs applied and acclaimed success stories by public authorities, the public outcry for responsive public service remains an outstanding challenge. Accordingly, this study aimed to examine the application of the Balanced Score Card (BSC) using a blend of survey and case study methods in 12 organizations selected from three major sectors in four major cities. The study intends to draw lessons for policy implications and consultants who aspire to support the public sector reform efforts in least developed countries. The preliminary output that applied descriptive and inferential statistics and qualitative analysis obtained from focus group discussions suggest that there is a strong desire from the public authorities to align public sector service delivery outcomes with strategic goals and public interest so as to make each job holder accountable for the intended result(s). Nevertheless, there were limitations in maintaining the momentum of the reform: both political and management support were erratic. Although the reform has resulted in a positive mental revolution with respect to the use of BSC among the constituencies involved in the process, the realization of their intentions has remained more form than substance. Interestingly, the study has generated multiple cases that can provoke thinking and empirical lessons for policy makers, consultants and others.

Keywords: *BSC, performance measures, good governance, public sector reform*

## **Abbreviations**

BPR- Business Process Reengineering

BSC- Balanced Scorecard

CCSRP -comprehensive civil service reform program

## **Introduction**

Performance measures are an important aid to improve performance in all aspects of a given organization. In this sense, unless a given organization measures and manages its performance, it is difficult to control its performance. BSC is one of the performance measures which enables an organization to translate its vision and strategy into a tangible set of performance measures that provides an enterprise view of an organization's overall performance by integrating financial measures with other key performance indicators around customer perspectives, internal

business processes and organizational growth and learning (Becker, Huselid, & Ulrich, 2001; Kaplan and Norton, 1992). Initially BSC's application was introduced in private sectors, and gradually its applicability was expanded to public organizations. Now the concept embedded in BSC is increasingly becoming applicable in both public and private organizations at large. In Ethiopia the public sector has undergone several reform initiatives at both federal and regional government levels. As a result the BSC management tool has been introduced over the last five years. One of the rationales for undertaking this particular study was the curiosity to check the effectiveness of the BSC at selected sectors of Oromia regional bureaus and local city administrative sectors.

### **Rationale of the Study**

Ethiopia has been actively engaged in reforming its public sector in an attempt to make it more responsive, transparent, flexible, and compatible with the demand of the public and its constituencies. Nevertheless, despite repeated comprehensive reform programs and the acclaimed success stories by public authorities, the public outcry for efficient and effective public sector service is still widespread. To a certain extent the country is falling behind the standards of some African countries to measure the effectiveness of the public sector. The country is also deteriorating in terms of its global competitiveness ranking including institutional quality. Above all, the anticipated reform outcomes by and large are also claimed by public elites to be incompatible with the pace of development of the nation.

In this regard, it is imperative to examine how the approaches used in introducing new performance measures through the use of BSC have resulted with respect to their intended outcomes. It is also important to consider the organizations that have implemented BSC with comparatively more professional service coaching and follow up during its implementation in order to identify the potential benefit and drawbacks of applying BSC as a reform tool. Accordingly, among the organizations which implemented BSC in Oromia Regional States, selective cases were considered for the purpose of this particular study. In sum, the study intends to address the following core questions:

1. To what extent has the application of BSC in the design and implementation of reforms favorably won the participation and commitment of employees at different levels in selected organizations?
2. To what extent has the application of BSC improved performance measures and management?
3. What are the major challenges and best practices in applying BSC in the context of the selected organizations?

### **Method of the Study**

The study used a combination of survey and case studies in its design. The study considered three major sectors and five major cities/towns as the target of the study. The intention was to obtain a comprehensive picture of how BSC has been introduced, designed, and executed. Such considerations allows the disclosure of the disparity of the way reform is introduced and

implemented from sector to sector and also provides an opportunity to consider the extent of variation from head offices to branch towns among the sectors.

### **Target of the Study**

The three sectors considered in the study were the Oromia Revenue Authority, the Oromia Urban Development Bureau, and the Oromia Trade and Market Development Bureau. The identifications of these organizations were carefully conducted after consultations with authorized experts from the civil service reform at the regional head office. The major locations in the study included Addis Ababa, Sebeta, Shashamene, Bishoftu and Adama. Thus, a total of 15 organizations that had implemented BSC were the target of the study.

### **Method and Techniques of Data Collection**

As the study has sought to obtain the full picture of the how BSC had been designed and implemented, it has carefully considered all the processes and views of the employees to be represented as a source of data. Therefore, in order to get the perspectives of the employees, employees from the representative process at different levels were given semi structured questionnaires. In addition, in order to get better insight, a BSC team from each organization was interviewed for better crosschecking. Accordingly, stratified sampling techniques for questionnaires and in depth interviews with the BSC teams were the major techniques of data collection. Since the size of the targeted organization considered in the study varied, average sample sizes of 15-20% were considered for the questionnaires. Also, at least three members of the BSC team were interviewed from each targeted organization.

### **Method of Analysis**

The nature of the study involved both quantitative and qualitative data. The analysis largely remained more descriptive while including a correlation analysis. The study also involves some degree of comparison among sectors and also a comparison of responses from head office sector organizations with responses from regional town sector organizations. The Cronbach's Alpha test result for responses from head offices (three sector organizations) for 30 standardized items were found to be 0.955 and, similarly, the Cronbach's Alpha test results for the responses obtained from three sector organizations from four major cities for 42 standardized items each were found to be 0.961. These results suggest the data obtained through questionnaires from all sector organizations were highly reliable. Regarding the method of analysis, the study largely used mean, mode and standard deviation values. In addition, it also used correlation tests in relation to the perceptual outcomes as a result of the BSC implementation. The qualitative data obtained through in-depth interviews were considered as an integral part of the analysis, conducted in a thematic manner, which allowed for a triangulation of responses. The unit of analysis remained regional bureaus as well as city administration sectors.

## **Analysis and Results: An Assessment of the Preparation of Designing, Introducing and Implementing the BCS**

According to the interview responses obtained from the three bureaus, it was unanimously suggested that there was a legitimate rationale for reforming the older performance measurement system in general; in particular, the older performance management system was not aligned with the strategic performance management system of the organizations. Accordingly individual performance was not issued from the strategic performance plan, and the overall performance systems were not customer/ citizen-focused. Above all, the performance systems were not sufficiently, objectively, and scientifically measured. Additionally, the older performance management system was blamed for lacking effective measures to make each jobholder accountable. Thus, the overall impressions shared among the respondents suggest that they have a shared understanding of the older performance system's deficiency and the need for reforming the existing performance management system. With regard to training, awareness raising training was given for all employees in a mass lecture mode whereas the training given for BSC team members was somehow blamed for lacking the capacity to create a sufficient shared understanding among the team.

Nevertheless, the training given at head office level was perceived better as compared to the training given at sector offices at the town level. What is more, there were some instances in which the wrong person was assigned to attend training. With regard to management's support in undertaking the reforms, the general sentiment reflected was that it is difficult to claim the top managers of the respective sector organizations were meaningfully involved in guiding, leading and coaching the reform process from its inception to implementation. The support from top management could be claimed to be sporadic in nature and not consistent throughout the process. The commonly cited reason was the leaders' over engagement in other agendas of the organization. In addition, there were tendencies of leaving the task of introducing, developing and implementing new systems related to BSC to the BSC team. Moreover, there were strong claims that the reform effort lacked a strong inbuilt system of monitoring and evaluation mechanisms, while the reform efforts failed to maintain the momentum in introducing the reform.

The issuing of BSC was top down as a result: Most of the coordination and overall guidance had been communicated down from Bureau levels to their respective local city administration sectors. Despite slight variations in the magnitude and tone of perceptual responses, the in-depth interview response results obtained from the three sector organizations from the towns of Sebeta, Shashamane, Bishoftu and Adama taken all together share the following general sentiment in common regarding how to make the reform more effective in its implementation with respect to the overall level of preparation, the training given to employees and BSC teams, the overall support and the follow-up system from the top management:

- All sector organizations from all targeted towns recognized the inherent deficiencies of the performance management system before introducing BSC. Accordingly, they share in the strong necessity of improving the existing performance system (its measurement and

alignment with strategic performance goals including performance linkages with reward system) and making each employee accountable for results so as to improve the quality of public sector service.

- In general, the way reform had been introduced had limited the employees' genuine involvement and wholehearted acceptance of the performance reform initiatives. The major reasons for this were due to several factors including: salary and benefit package increases, promised immediately after reengineering through BPR, were delayed; the reform duration took longer than expected while failing to maintain the necessary pace of momentum; and the kind of training given failed to bridge the perceptual disparity with respect to a sense of ownership of the reforms. As a result, employees sometimes were confused, and they sometimes doubted whether reform was really a serious matter with there being waves of reform, one after the other.
- Similarly the BSC team members from all the towns and across the three sectors considered the process of introducing BSC to be seemingly dominated by tedious paper work involving a lot of cosmetic and superficial activities: that is, more form than substance. Consequently the sense of ownership among the employees and even BSC teams were challenged.
- There were also instances of adopting BSC and strategic performance management documents from respective sectorial head bureaus without fully comprehending the complexities involved in their existing performance management system. Some also even considered the way that reform was introduced to seem more of an imposition from top.
- Sometimes there were instances in which the very experts who were trained to lead the process of change seemed to lack a sufficient understanding of the technical details of BSC. There were also instances of unrelated individuals attending training which was meant for the BSC team. Moreover, in most towns, the BSC staff turnover remained an outstanding challenge that contributed to erratic progress in introducing the reform.
- The support and follow up from the top management during the reform process was found to be erratic. Most top management members were not sufficiently involved during the training process. Some even considered the tasks of BSC to be seemingly left for BSC teams, where the top management just relays reports they receive from the BSC teams. In addition, the top management, on top of their regular duties with tight schedules and traditional routines, was overly stretched in discharging political commitments and being involved in several committees and was overly engaged in attending frequent meetings due to the so called "yezemecha sira."

### **Examination of the Business Process Perspectives and Its Link with Performance**

Most of the employee responses from the level of the three bureaus indicated the organizations' vision and strategic direction is very clear to everyone. The mode responses regarding whether the organizational procedures, policies, and processes allow for efficiency suggest most employees perceive this to be the case; the standard deviation values may be explained by variations among sectors.

The majority of employee responses from the revenue authority indicated the organizations' vision and strategic direction is very clear to everyone. Similarly, despite slight variations among respondents, most of the employee responses from urban development as well as trade and market development bureaus indicated their organizations' vision and future direction is clear to them. More specifically, considering the responses as a percentage, 90% of employee responses from revenue authority, 60% from urban development and 59% from trade and market development bureaus indicated they have a clear understanding of their organizations' vision and future strategic direction.

These responses suggest the creation of a shared vision particularly in urban development and trade and market development bureaus has to be further strengthened. Most of the employee responses from the revenue authority and urban development bureau responded that the organizational procedures, policies, and procedures allow for efficiency whereas employee response from trade market development suggest the existence of limitations with regard to organizational procedures, policies and procedures in allowing for efficiency of operations. More specifically, as a percentage, 90% of respondents from revenue authority and 55% of respondents from urban development indicated the organizational procedures, policies and processes allow for efficiency whereas only 37% of employees from the trade and market development bureau responded the same. Thus, the perceptual response, particularly at trade and market development and urban development bureaus, suggests the necessity of examining why the existing organizational procedures, policies, and processes may not sufficiently allow for operational efficiency.

The overall perception held among the three sector organizations from four major cities (Sebeta, Shashemene, Bishoftu and Adama) is evaluated positively with slight deviations with regard to the following areas: their understanding about their respective organization's vision and strategic direction; their respective roles and their interdependency and interrelation with other departments; and whether their duties are issued in a strategic performance direction. However, employee responses indicated greater variation regarding whether the organization procedures, policies and processes allow for efficiency. Thus, it seems the existing organization policies, operational procedures and processes have limitations in bringing about operational efficiency.

On the other hand, almost a majority of the employee responses indicated that they understand the link and alignment of their duties and responsibilities with the strategic performance of their respective organizations. Yet there are variations of responses from the general trend from town to town and also from sector to sector. A majority of employee responses from all the revenue authorities from the regional towns and most employee responses from trade and market development bureaus indicated organizational policies, procedures, and processes allow for efficiency. However, in the Oromia urban development bureau/municipality a significant number of employee responses suggest that the existing organizational procedures, policies and procedures have limitations in ensuring operational efficiency.

## **Performance Goals, Standards and Measurement Related**

Most of the employee responses from the three sectors at regional government head offices taken together indicated that the performance goals and measures are perceived to be both aligned with the organization's strategy and realistically attainable. Similarly, most employees perceive the performance standards are aligned with stretch objectives. However, deviations from the mean values necessitate sector specific explanations for the variations. Also, most of the employee responses indicated that the performance measurement standards and systems are not free from bias. More specifically, 87% of employee responses from the revenue authority bureau, 65% from the urban development bureau, and 62.5% from the trade and market development bureau indicated the performance goals and measures are aligned with the organization's strategy. Similarly, almost 74% of employee responses from revenue authority, 52.5% from urban development, and 56% from trade and market development considered the performance and goals to be realistically attainable.

Moreover, the employee responses with regard to the alignment of performance standards with stretch objectives indicated that 77% from revenue authority, 67.5% from urban development, and 59% from trade and market development consider the performance standards to be aligned with stretch objectives. In the Oromia revenue authority the vast majority of employee response attested to the performance standards and goals being aligned with both stretch objectives and the organizational strategy. Similarly, the performance measures and goals were perceived as attainable by a vast majority of the employees; however, a good numbers of employees still perceive that the performance measurement standards and systems are not free from bias. On the other hand, most employee responses from urban development and trade and market development perceive that performance goals and standards are relatively aligned with both strategy and stretch objectives. Similarly, in both bureaus most employees perceive performance measures and goals to be attainable. Nevertheless, most of the employees did not consider the performance measurement standards and systems to be free from bias.

With regard to communication of performance standards and goals to every employee, 64% of employee response from revenue authority, 37.5% from urban development, and 47% from trade and market development responded that the performance standards and goals are sufficiently communicated throughout the organization. Accordingly, the responses indicated in both urban development and trade and market development that the performance standards and goals are not sufficiently communicated to the members of the organizations.

The mode values of the aggregate responses from the four towns across the three sectors suggested that in relative terms the performance goals and measures are perceived as aligned with the overall strategic performance goals and stretch objectives of the organizations. Similarly, most of the employees perceived the performance goals and measures to be realistically attainable. However, the existence of higher standard deviation values suggests there are significant deviations from sector to sector. Despite slight variations among the respondents, most of the employees across the three sectors by and large do not perceive the performance measurement standards and systems to be free from bias.

Considering an organization specific explanation for variation, almost 35% of employees from Shashemene, 42% from Sebeta and almost 33% from both Adama and Bishoftu perceived that the performance goals and measures are not aligned with the organization's strategy. Similarity 52% of respondents from Sebeta, 30% from Bishoftu, 48% from Shashemene, and 36% from Adama suggested that performance goals and measures are not realistically attainable. With regard to whether the performance standards are aligned with the stretch objectives, 50% from Sebeta, 45% from Sebeta, 52% from Shashemene, and 44% from Adama claimed the performance standards are not aligned with the stretch objectives in their organization. Finally, 39% of employee responses from Sebeta, 36% from Shashemene, 42% from Adama and 62% from Bishoftu agreed that the performance measurements and standards are not free from bias. In general, these specific variations strongly suggest that there is need to further examine the extent to which the performance goals and measures are aligned with strategic performance plan goals and stretch objectives. Moreover, the prevalence of the perception of bias related to performance measurements and systems warrants the attention of the concerned body to ensure the objectivity of performance measures and systems. There are mixed responses whether the performance standards and measures are free from bias.

In Sebeta, Adama and Shashemene, across the three sector organizations, almost half of the respondents claimed that the performance standards, measures and systems are not free from bias. This suggests there are elements of a spoils system strongly competing with the merit and objectivity of performance measurement and evaluation systems. Hence unless timely corrective measures related to the matter are taken, it has the potential to erode the credibility of the performance measurement and evaluation systems which might gradually erode the trust between the management and the employees at large. Most of the employee responses with regard to their understanding of the future direction of their respective organizations and their specific duties and responsibilities in connection with strategic performance direction were positive: i.e., the overall impression of employee responses across the three sectors from the four cities considered in the study indicated their understanding of the organization's future direction and their duties and responsibilities are heading in positive directions. Yet the existence of slight deviation from the general trend requires further improvement in creating a shared understanding among all the employees. Similarly, employee responses with regard to whether the performance evaluation and process is becoming clearer suggest a mix of positive gains as well as the existence of some confusion. The existence of standard deviation values suggest the need for sector specific and organization specific explanations for the variations.

Most of the employee responses strongly suggest that the performance measurement and reward systems are not highly motivating. Yet the variation shows slight deviation from the general impression. The aggregate employee responses from the three sectors across the four regional towns taken together mainly suggest there are limitations in the communication of performance standards and outcomes to each employee. Similarly, although a good number of employee responses indicated the performance evaluation and its process after BSC implementation become much clearer, the mean and standard deviation values suggest the existence of significant deviation

that requires sector wide explanations on the matter. Moreover, the responses regarding whether the performance evaluation and measurement process is free from either bias or nepotism indicated mixed responses. Although it is difficult to indicate the exact magnitude, objectivity and merit systems related to performance measurement and evaluation systems are in some way encircled with favoritism and malpractices.

The sector specific general responses suggested that almost 70% of employees from revenue authority in general believe that the performance standards and outcomes are clearly and sufficiently communicated whereas 59% and 60% of employee response from the municipality and trade and market development bureaus respectively indicated the performance standards and outcomes are not clearly and sufficiently communicated. Aggregate employee responses with regard to whether the performance evaluation and its process after implementation has become much clearer indicated mixed results. Specifically, 45% of employee responses from revenue authority, 64% from municipality and 51% from trade and market development indicated the performance evaluation and its process after the implementation of BSC is not becoming more transparent. From each sector nearly 60% of employee responses indicated that they perceive that the performance evaluation and measurement process miss the element of objectivity while they allow room for nepotism to overshadow the process.

### **The In-depth Interview Summary Reports Related to Performance Goals, Standards, and Measures**

According to the in-depth interview summary reports from the regional head offices of the three sectors, the shared responses with regard to how carefully performance goals, measures, and standards were issued from strategic performance plans and to what extent these targets, standards and measures were sufficiently aligned with strategic performance plans including stretch objectives; how measurements and evaluations had been practiced; and finally some of the challenges of performance measures and evaluations indicated the following:

- The major problem with the strategic performance planning documents was that they were not meticulously developed. In addition the process was not sufficiently participatory.
- Using uniform and more of objective indicators were also a challenge especially in the case of qualitative measures and cross-cutting issues. Some of the measurement criteria considered were not directly related to the performance.
- There were instances of performance standard and criteria misalignment with strategic performance indicators.
- There were inconsistencies in defining performance measures and indicators. In addition, the inclusion of cross-cutting issues in the criteria made it difficult to make the evaluation objective.
- The most critical challenge that has contributed to subjectivity and favoritism in the performance evaluations emanated primarily from a lack of consistent individual scorecard keeping practices in the organizations. Furthermore, applying 360 degree evaluation

practices have proved challenging to apply consistently due to disparities in the nature of tasks at the front and back offices in offering services.

- More importantly since the implemented performance measurement system is very far from sufficiently and objectively evaluating each employee, linking performance measures with rewards becomes a challenge. This in turn has resulted in fostering a sense of frustration among the majority of the employees. Thus, if this sense of frustration continues, the success of BSC implementation will be greatly challenged.
- The preparation of a strategic performance plan out of which other performance targets and standards are issued was not supported by a sufficient baseline survey. The strategic performance documents lacked the capacity to sufficiently reflect the contextual realities of the sector organizations.
- The developed criteria for performance measures contained many inconsistencies and were subjected to frequent changes of form and format, which usually came from the regional government level.
- Despite the attempt to issue the performance measures and targets, there were gaps in documenting performance records of each employee. Continually keeping individual scorecards remained a challenge. As a result, elements of subjectivity in the evaluation process were rampant.
- Performance measurements have a problem related to weight—the documentation of individual score cards. There were also challenges in applying a 360 degree evaluation.
- The criteria for evaluation of employee performance tended to be unrealistic, and some of the content of the criteria for performance measurements tended to be subjective (especially in relation to cross cutting issues)

### **Examining Learning and Growth Perspectives of BSC Implementation**

Although the general impression held among most of the employees from the three sectors taken together suggested that performance standards and outcomes were sufficiently and clearly communicated to each employee the mean and standard deviation values shows significant variation from the general impression held by many. In revenue authority 61% of the employee responses indicated that the performance standards and outcomes were clearly and sufficiently communicated to every employees whereas in urban development and in trade and market development only 27.5% and 31% of employee responses indicated the performance standards and outcomes were clearly and sufficiently communicated to each employee. This implies nearly 70% employee responses from urban development as well as trade and market development confirmed the performance standards and outcomes were not sufficiently communicated to them. This suggested the prevalence of a huge communication gap with regard to communicating the performance standards and outcomes in the urban development and trade and market development bureaus.

With regard to the feedback system's effectiveness, the employee responses in general indicated strong limitations with the feedback systems of the three sector organizations. Only 48%

of the respondents from revenue authority, 30% from urban development, and 47% from trade and market development responded that the feedback system in their organization had been effective. Similarly, 58% from revenue authority, 25% from urban development, and 38% from trade and market development responded that there were effective and adequate information systems to ensure quality decisions in the organization. On the other hand, the employees' perceptual response with regard to the extent which the BSC application improved effective information sharing among departments indicated the following: 68% from revenue authority, 50% from urban development, and 37.5% from trade and market development considered that the use of BSC to ensure effective information sharing among their respective departments in their organization. Thus, more than 60% and 50% of employee perceptual responses from urban development as well as trade and market development indicated the application of BSC were unable to improve information sharing among their respective departments. The aggregate employee responses from the three sectors and all regional towns strongly suggested the feedback system in the organizations is far from being effective. Moreover, the quality and adequacy of the feedback system has limitations in making progress in the organizations, and variations of responses require sector specific explanations. In conclusion, most of the employee responses suggested that the implementation of BSC has somehow improved the level of information sharing among the departments.

Nevertheless, the mean and standard deviation values indicated variation in responses among employees. Sector specific responses suggest that in revenue authority the information and feedback system were perceived relatively better, whereas almost more than 63 percent of the responses obtained from the municipality and trade and market development bureaus suggested that there were limitations in the information and feedback systems in their organizations.

### **Training and Capacity Building Opportunity Related**

Most of the employee responses taken together from the three sector organizations indicated the application of BSC has improved opportunities for building further capacities. In addition, despite significant variation from the generally perceived response, a good number of employee responses suggested there were continuously practices of skill and efforts to upgrade expertise in the organization. The opportunities for building capacities including practices for upgrading skills were in general perceived far better at revenue authority (68%) whereas similar capacity building and skill upgrading practices at urban development (40%) and trade and market development (44 %) were perceived lower. As was observed, the majority of employee responses from the four municipality as well as the trade and market development bureaus indicated that the performance measurement and reward systems were not highly motivating. Surprisingly, although the payment and benefit package in revenue authority was higher, a significant number of employee responses indicated the performance measurement and reward system was not highly motivating. The overall responses of all employees from the three sectors and across the four towns in general indicated that skill upgrading trainings were not regularly offered. However, the application of BSC has been generally perceived as opening opportunities for employee training and skill upgrading. Further, considering sector specific responses indicated that 44% from

revenue authority responded that training for skill upgrading was regularly given in their organization. Similarly, 61% of employee responses indicated the application of BSC has increased opportunities for the employee training and development. On similar matters, 58% and 57% of employee responses from the municipalities and trade and market development bureaus respectively indicated the application of BSC had not offered them an opportunity for training and regular skill upgrading practices. Simply put, at all regional towns capacity building training and skill upgrading practices were minimal, particularly at both the urban development and trade and market development bureaus; however, at revenue authority, the scenario was perceived relatively better.

### **Top Management and Employee Work Attitudes Related**

A significant number of employees from trade and market development sincerely doubted whether the top management's approaches and treatment can ensure mutual organizational trust. A good number of employees from the urban development bureaus seemed to share similar sentiments regarding whether the approaches of the top management really ensured mutual trust among members of the organization. On the other hand, the top management's approach from revenue authority was somehow believed to ensure mutual trust among the members of the organization. The sector wise percentage responses with regard to whether the way in which top management discharged their duties strongly ensured trust within the organization was as follows: 70% from revenue authority, 51% from municipalities, and 62% from trade and market development responded that the way the top management discharged their duties could ensure trust within the organization. However, in regional municipalities almost half of the respondents perceived the way the top management discharged their duties as less likely to ensure mutual trust among the members of the organization.

### **Employee Work Attitudes from Regional Town Sector Organizations**

Among several factors responsible for employee attitudes towards their jobs, their working environment and the degree of significance they attach to their contribution to the overall attainment of organization's goals are worth paying attention to. Consequently this study focused on these factors.

The majority of employee responses across the three sectors and from all the towns considered indicated they like and enjoy their jobs. The majority also responded they feel they are making valuable contributions while performing their assigned duties. However, the slight deviations from the general response pattern suggested the existence of variation either among individuals or sectors. With regard to working conducive situations, despite slight variations, the majority of the employee responses suggested their working environments are not conducive.

With regard to their attitude towards their job and their working environment situation, most of the employees suggested that they are making valuable contributions to their organization in discharging their duties. Also, most employees, particularly from revenue authority as well as trade and market development, considered their working environment to be somehow conducive with respect to discharging their duties. However, almost half of the employee responses from

municipalities across the four regional towns taken together did not perceive their working environment to be conducive. In particular, employees from Bishoftu and Adama suggested their working environment is not conducive. The summary of the responses obtained from the head offices at the three sectors among the BSC teams unanimously shared the following dominant perceptions:

- It was difficult to tell that top management had been meaningfully involved in guiding, leading and coaching the reform process from its inception to its implementation. The support from top management could be claimed to be sporadic in its nature and not consistent throughout the process
- The ability of top management to follow up, monitor, and evaluate were perceived as weak due to their commitment with other engaging tasks and having to discharge other politically assigned obligations. Also, in general, it still seems to be a spoil system and not a merit based system.
- There was no well-organized and well-structured ongoing capacity building program due to financial constraints.

Similarly most of the BSC team members across the three sectors and all the regional towns indicated:

- The support and follow up from the top management during the reform process was erratic. Additionally, there were high turnovers of leaders.
- The so called ‘yezemech sira’ and over commitments of the top management in various committees including meetings had significantly limited the managers’ commitment in the process of implementing BSC.

In sum, the top management’s support, involvement and leadership role at the head office level was perceived to be much higher as compared to the top management in regional towns across the sectors.

### **Examining the Allocation of Organizational Resource Perspectives**

Most of the employee responses from the three sector organizations taken together indicated there are shortages of organizational tools and facilities and limitations of supporting operations with IT facilities. Moreover, organizational systems and processes were not considered to be supported by modern technology. However, the existences of slight variations from the mean value suggested sector specific variations. Revenue authority’s organizational tools and facilities were better perceived as adequately available than in urban development as well as trade and market development, where limitations of organizational tools and facility shortages and/or inadequacy was suggested. In addition, employee responses from urban development as well as trade and market development indicated the organizational operations and systems are not sufficiently support by IT and modern technology. At the head office level, with respect to the facilities, tools, and the extent of the support of the operation with modern technology including

IT, revenue authority was perceived in a relatively better position than both the municipality and trade and market development bureaus, where a significant number of employees considered the facilities inadequate and the processes of the organizations not supported by modern technology including IT.

The aggregate responses from most of the employees across the three sectors from the regional towns suggested the following: there are shortages of the necessary tools and facilities; the organizational operations are not sufficiently supported by information technology and the automation system. The standard deviation values indicate slight deviation from the general trend that need organization-wide or sector-wide explanations.

Although the aggregate responses from most of the employees across the three sectors from the regional towns suggested that there are shortages of the necessary tools and facilities, greater shortages of office facilities and tools are observed in the municipalities and trade and market development bureaus. Support of organizational systems and processes with modern technology and IT was perceived as far better at revenue authority, whereas at both the municipalities and trade and market development bureaus, it was considered minimal.

### **Budget Availability and Utilization Related**

The overall insights from the employee responses from the three sectors taken together suggest the budget's allocation, adequacy, and utilization have limitations in the form of miss allocations and inadequacies. Considering more sector specific responses, 52%, 35% and 41% of employee perceptual responses from the revenue authority, urban development, and trade and market development bureaus respectively indicated that the budget allocated to their organization is inadequate. Thus, the general perception across the three sector organizations seems to be that the budget allocated to their organization is not sufficient. Particularly at the urban development bureaus, budget shortages were highly noted. Similarly, 74% of employees from revenue authority thought that budget utilization in their organization was efficient whereas only 27.5% from urban development and 34% from trade and market development thought the same. In terms of budget utilization, the employee perceptual response from urban development and trade and market development strongly suggested that there are mis-utilizations of scarce organizational resources, whereas at revenue authority the majority the employee responses suggested that budget utilization is relatively better.

Interestingly, employee responses regarding whether the application of BSC has improved budget utilization in their respective organizations indicated that 61% of employee responses from revenue authority, 47% from trade and market development and 32.5% from urban development considered the application of BSC to contribute towards better utilization of the organizational budget. In sum, at revenue authority both budget allocation and utilization were perceived as better. It was also perceived that the application of BSC had relatively improved budget utilization in this organization. At both urban development as well as trade and market development, budget allocation was perceived as insufficient and its allocation was also perceived to involve

deficiencies. Sadly, in these organizations the application of BSC has not sufficiently improved the problems of budget allocation.

The majority of employee responses with regard to the adequacy of the budget in the regional towns suggested it was not adequate whereas the allocation of the budget was perceived relatively better. However, the mean response and standard deviation values seem to suggest the existence of significant variations among sectors and towns. Considering town specific responses, 64% from Sebeta, 55% from Bishoftu, 67% from Shashemene, and 44% from Adama claimed that the budget's allocation was inadequate. With regard to efficient budget utilization, 61% of the responses in Sebeta and 54% in Shashemene suggested the budget utilization in their respective organization was not efficient. Nevertheless, only 28% and 32% from Bishoftu and Adama, respectively, suggested there was an inefficient utilization of the budget in their respective organization.

### **The Link between the Reward System and Performance Management**

As clearly depicted in the bar chart below, the greater majority of employees from the three sectors responded that the performance measurement and reward systems in their organizations were not highly motivating. Similarly the perceptual responses from the regional towns clearly attested that the performance based reward system was perceived to be disappointing. On the other hand, the in-depth interview response from the head office suggested that although the budget is small, if utilized properly it is adequate enough for accomplishing organizational tasks. However, other than revenue authority, the use of office technologies and IT at the urban development as well as trade and market development bureaus were only at the planning stage.

Unlike the head office facilities of most regional towns, tools and budget shortages were perceived to be higher. The in-depth interview also attested that at the municipalities and trade and market development bureaus the plan to support organizational operations with modern technology and IT remained sluggish. And finally, the in-depth interview responses at both the head office and regional towns across the sector organizations unanimously seems to suggest the application of BSC is far from bringing a performance based reward system.

### **Examining the Stakeholders and/ or Customer Perspectives of BSC**

The overall impression of the employees from all the sectors taken together with regard to customer service and its quality, the organizational motto and the level of customer satisfaction was perceived to have shown positive improvements overtime despite slight variations among the sectors. Considering sector specific responses, revenue authority implied the overall impression and practices to serve the customer were improving in comparison to urban development and trade and market development.

Despite slight variation among employee responses, the majority of the responses indicated that giving quality service for their customers and at the same time continuously improving the quality of their organization's services were becoming the organization's primary concern and motto. Nevertheless, a strong deviation suggests organization specific variations in the orientation of customer service. Thus, there were mixed responses with regard to whether the customers are

satisfied with the quality of service offered. Similarly, the mode response of all employees taken together suggests that the implementation of BSC helped the organizations to give attention to customer complaints. Nonetheless, slight variations from the mean values indicate the existence of variation among the sectors and/or towns.

Although more than 80% percent of employee responses from all the sectors across the four towns considered their primary motto to be serving the customer, only 57.5% from revenue authority, 41% from municipalities and 47% from trade and market development claimed customers were satisfied with their service provisions. Thus, this seems to suggest that although the overall orientation to serve the customer was perceived to be significantly improved, the actual delivery of service to customers has not yet been able to meet their expectations nor approach the desired standard of quality.

In general the in-depth interview responses from both the head office and regional towns has confirmed that, as a result of the cumulative efforts of ongoing reform, there are significant improvements in terms of customer service: There are attempts to decentralize the service and make the service more accessible to the public. The attempt to reduce the work cycle time is somehow improving as well. Particularly in revenue authority, it has started to become a routine to educate the customers on a regular basis. Moreover, they are beginning to give more attention to customer complaints. Nevertheless, they also admit that, despite some gains as compared to the past, meeting the increasing public requests for quality service will remain one of the outstanding challenges in their respective organizations. They also hope that, since customer service orientation is improving, overtime those among the public servants will offer a good platform for introducing sector specific, carefully designed interventions to improve customer service offerings in their respective sector organizations.

### **Assessment of the Overall Improvement and Gains as a Result of BSC Implementation**

Most of the employee responses from revenue authority as well as urban development indicated that the application of BSC has significantly improved the overall performance of their organization, whereas there are mixed feelings whether the application of BSC has significantly improved the overall performance in the trade and market development bureaus.

Despite sector specific variations among the respondents, the overall impression of most of the employees from the three sectors taken together suggest that after the application of BSC the cycle time for service offerings is shortened. Improvements were also observed in the learning and growth capacity of the organization and the realization of performance targets.

The summarized responses obtained from employees at head offices from revenue authority as well as from urban development claimed that the application of BSC has significantly reduced the length of time to offer a service and has improved the learning and growth capacity of the organization; however, responses from trade and market development seem to suggest the cycle time to offer a service has not been significantly reduced and the learning and growth capacity of the organization has not significantly improved.

The mode value of all employees from the three sectors across the four regional towns indicated there are perceptions of postive gains after the implmentation of BSC with regard to the

following: better budget utilization; reductions in work cycle time; meeting the performance goals/targets; the quality of customer service; and revisions of performance goals, targets, and measures. However, the mean and standard deviation values indicated the need for further explanation for the variations in response from sector to sector.

Considering sector specific responses, most of the responses suggested that after implementing BSC, budget utilization showed relative improvements in revenue authority as compared to trade and market development. The perceptual responses held by most the employees at municipalities suggested that budget utilization has not shown improvement even after BSC implementation. Similarly, the perceptual responses suggested that, although the work cycle time was perceived to be shortened by a good number of employees in the three sectors at revenue authority, better improvements were observed by the trade and market development bureaus as well as municipalities. Nearly 42% of employee responses from municipalities indicated the work cycle time was not practically shortened. Finally performance targets were perceived to be better met in revenue authority as compared to trade and market development and municipalities.

After the implementation of BSC, most employees across the three sectors from all the regional towns perceived work cycle time to be shortened. On the other hand, budget utilization improved, work cycle time was shortened, and performance goals and targets were perceived to be better met at revenue authority after the implementation of BSC as compared to both the municipalities as well as trade and market development bureaus.

### **Perceptual Responses Obtained Through In-depth Interviews after Implementing BSC**

Despite the challenges which encircle undertaking the reforms, the ongoing waves of reforms seem to suggest a strong desire from the government to make its public sector more transparent, responsive and more satisfying in meeting the expectations of its public. Moreover, there are strong attempts to decentralize the service, improve the office layout, and open two or three office branches for selected sectors in order to make service more accessible to the public. Furthermore, after the reform, offering information to the customers through information desks and attempting to respond to customer complaints are getting attention; in some instances regularly educating the customer—for instance, at revenue authority—are among the positive gains of the reform. Nevertheless, the reform could fail to result in making each individual accountable for the duties which they are given, and, most importantly, successfully implementing an effective performance based reward system is still remote for all public sectors.

In general, there are positive gains from the reform: there is a shift in mindset from a routine-tasks oriented operation towards a strategic oriented performance management system. Also, understanding the necessity of objective measurements and thinking in terms of serving the customer were among the positive mental gains from the reform. Nevertheless, designing a performance management system that issues each employee a task from the strategic performance goals and measuring each employee's task both objectively and scientifically to make them accountable for the results are outstanding challenges even years after implementing the reform tool that was intended to improve performance management and measurement.

- Reforming the organization and applying BSC seem to show relative improvements with regard to: thinking in terms of the link of each employee's work with the overall strategic objective of the organization, the sense of serving the customer and offering time bounded services. However, in some towns there are not sufficient waiting spaces for customers, information desk are not properly functioning and the tasks of educating the customers lack consistency.
- There are also decentralized service offerings and a better awareness in creating a mental revolution with respect to serving the customer. However, the so called 'yezemecha –sira' and frequent meetings sometimes poses a challenges for some managers to be available to serve the customers.
- There has been a positive mental revolution with regard to linking individual performance with strategic performance plans, and thinking in terms of serving the customer has shown some progress in comparison with past practices; however, the challenge has grown as customers have grown more demanding over time.
- After BSC implementation employees were made aware of their individually assigned tasks, and their orientation and thinking changed. Every employee thinks in terms of his/her individual task in relation to fulfilling the strategic performance goal. However, with respect to the evaluation, there are limitations in keeping objective records on individual performance. In addition, the paper work involved in the process was perceived to be tedious.

### **Correlation Tests on Selected Outcomes of BSC Implementation**

The correlations tests helped to check the degree and nature of associations among the variables; the extent and nature of the association among the perceived outcomes of BSC at both the head office and regional towns are presented consecutively. According to the correlation test, a positive and significant degree of association can be observed as a result of the application of BSC: if the duration for offering service improves, it helps to better realize one of the performance targets as well as improve the level of customer satisfaction. Similarly, as it is indicated in table 24 below, a positive and significant correlation can be observed that, if the uses of BSC improve information sharing among departments, it may result in improving the opportunity for capacity building as well as performance in the organizations. Therefore, these strongly suggest that, if information sharing among the department becomes effective, both opportunities for further capacity building and the overall realization of organizational performance will improve. At the level of regional towns with respect to the three major sectors, a positive and significant correlation can be observed that if the implementation of BSC can shorten work cycle time, the quality of customer service, the attention given to customer complaints and meeting performance goals and targets will improve significantly.

In sum, the correlation test results strongly suggest that, if implemented correctly, the use of BSC has strong potential to deliver the following positive outcomes: shortened cycle times; improved quality of customer service; better results in customer satisfaction and achieving

performance goals and targets; and most importantly better information sharing as well as persuading the organizations to think in terms of building their capacity.

### **Summary of the Major Findings**

Based on the analysis of the findings, the following generalizations are drawn:

- Top managers were meaningfully involved in guiding, leading and coaching the reform process from its inception to implementation.
- Overall reform monitoring and the evaluation system were not systematic and tended to be sporadic in their approach.
- Despite the government's strong intention and commitment to reform the public sector, the approach remained top down, and level of preparation and support from the consultants was found incompatible with the comprehensiveness and number of organizations looking for support
- The training given at the regional head office level was perceived better as compared to the training given for sector offices at the regional town level. Also, the training did not go deep enough to create a shared understanding and technical mastery on the use of BSC tools among the team members.
- Frequent turnovers of trained BSC employees and instances of assigning the wrong person for training suggested a critical challenge, particularly at regional towns.
- The strategic performance plans, out of which other performance related goals, targets, and measures are issued particularly at regional town levels, were not based on the baseline surveys of their respective sector organizations.
- As a result of the cumulative efforts of ongoing reform, there were significant improvements in terms of orientation towards serving the customer, although offering quality service to a demanding public remained an outstanding challenge.
- There were positive gains from the reform: there was shift in mindset from a routine-tasks oriented operation towards a strategic oriented performance management system. Understanding the necessity of objective measurement and thinking in terms of serving the customer were among the positive mental gains from the reform.
- A reward system is still in the remote distance in all public sectors due mainly to a lack of keeping consistent individual scorecard records among other factors.
- Designing a performance management system that strongly issues each employee's task from the strategic performance goals and measuring each employee's task both objectively and scientifically to make them accountable for the results are outstanding challenges even years after implementing the reform tool that was intended to improve performance management and measurement.
- Timely corrective measures have to be introduced based on the outcomes of a consultative dialogue that involves performance management experts, BSC teams, top managements, and key employees from each sector; the application of BSC will not bring about the intended gain.

- It is also imperative to draw a boundary between spoils systems and merit systems in the public sector while simultaneously working towards instilling professional values in the public sector.

### **Conclusion and the Way Forward**

The ownership and involvement of top management is critical at all levels. The proper design of performance measures based on baseline survey data is required followed by sufficient training to be provided at all levels. A proper automation system has to be in place to properly measure individual and institutional achievements and this to be linked to a rewards system that motivates the best achievers.

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## **A Brief Note from Editorial Management Team**

*International Journal of African Development (IJAD)* is an open access interdisciplinary journal on issues related to sustainable development in Africa that began in 2013. The first issues featured 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 final manuscripts using APA format to be considered for review before they are accepted.

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