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Review

Declining economy in Zambia and its impact in food security

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Zambia is a landlocked country located in southern central Africa and it is one of the poorest countries in the world and is considered a least developed country. Malnutrition is a chronic and difficult problem in this country. Agriculture is the main occupation and maize is the staple food. About 90% farmers of the country are smallholders, dependent on rain fed agriculture. After independence it was rich in food and could export maize but since 2002 it has to import maize every year. Literacy rate is low and women are less literate than men. Human immunodeficiency virus infection/acquired immunodeficiency syndrome (HIV/AIDS), tuberculosis and malaria are fatal diseases in Zambia and mortality rates are among the highest in the world. The rural transportation network is largely undeveloped and communication costs are very high; foreign direct investment is also very low. The main export of the country is copper. According to the Food and Agriculture Organization, 49% of the Zambian population is undernourished and unable to access minimum energy requirement.

Key words: Copper, economy, food aid, food security, poverty, Zambia.

INTRODUCTION

Zambia is one of the poorest countries in Africa. About 70% of the population lives below the poverty line (less than \$1.00 a day or unable to afford to buy food providing a daily intake of 2,100 Kilocalories). Maize is the main staple food of this country. When it became independent from Britain in 1964, it was a prosperous country in Africa. Then the country's full economy depended on copper exports. When the population has grown rapidly and maize production has decreased due to drought and flood, the country face economic crisis. On the other hand, in 1980s and 1990s global copper price decreased. As a result, remittance from copper export decreased and the country's economic structure has broken. Most of the labor of the copper mine lost their jobs. After 1975, Zambia faced various difficulties such as fall of copper price, political turmoil in neighboring countries and severe effects of the first oil shock. In December 2000, Zambia's external debt became \$6.3 billion.

After independence, it could export maize but since 2002 it has to import maize. Agriculture is the main occupation of Zambia. Only 14% of total agricultural land of Zambia is being utilized for agriculture.

Malnutrition is a chronic and difficult problem in

Zambia. Increased hunger reduces people's ability to fight against diseases. The government is not in the position to provide basic drugs and services sufficiently. Human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS), tuberculosis (TB) and malaria are fatal diseases in Zambia and treatment facilities of these diseases are limited. At present in Zambia, death rate is about 23% due to HIV/AIDS and most of the HIV/AIDS infected people are of young generation. The number of orphans has increased to over 600,000. It is estimated that 13% of all Zambian children are orphaned as a result of HIV.

Mortality rates are among the highest in the world. Infant mortality rate is 11.2% of live births in 1999 and maternal mortality rate is at 0.90%. The HIV/AIDS became pandemic in the 1990s due to lack of health consciousness. As the HIV/AIDS infected more among the very poor, they are quite unable to take medical treatment.

Recently the USA has increased foreign direct investment in Zambia. The US Government's (USG) health programmes supports Zambia's National Health Strategic Plan to combat malaria and tuberculosis;



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improve maternal and child health; promote family planning and reproductive health; and, prevent HIV and provide care and treatment for those already infected with the virus. The USG assistance supports a range of Government of Republic of Zambia's (GRZ) interventions to improve maternal, newborn, and child health.

ZAMBIA AS AN AFRICAN GEOGRAPHICAL SETTING

The name of African country 'Republic of Zambia' comes from the Zambezi River, which rises in the north-west corner of the country and forms its southern boundary. Lusaka is the capital city of the country. Name of the national currency is Kwacha (Kwacha, K 4,775 = \$1.00 in 2010). It became independent from Britain in 1964. It is known for its peaceful people, incredible natural beauty, fertile soil, and vast mineral wealth.

Zambia is a republic country and the president is elected every five years by universal referendum, exercises considerable power. The largest party in the National Assembly, the legislature, is the Movement for Multiparty Democracy (MMD), which has held power since 1991. Zambia maintains smaller military forces than its neighbors. In 2006, the UK based International Institute for Strategic Studies estimated the active Zambian army at 13,500, with another 1,600 in the air force. Paramilitary forces numbered 1,400 and comprised a 700-strong police unit as well as a police paramilitary unit. Most of the Zambians are Christian and the state religion is Christianity; there are also substantial minorities of Muslims (Country Profile, 2007).

Zambia is a landlocked country located in southern central Africa. It is a politically stable, multi-party democratic, rich in natural resources. The neighbors are Democratic Republic (DR) of the Congo, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia, and Angola in clockwise. The area of the country is 752,614 km². It is a country of great diversity in terms of race, ethnicity, linguistic and religion. Its population is 14 million in 2013 which is divided into more than seventy tribes. Its population is growing at a rate of 2.8% per year. The major tribes are: Lozi (Western Province), Bemba (Northern Province), Ngoni (Eastern Province), Tonga (Southern Province), Lunda (Luapula and Northwestern Provinces), and Luvale and Kaonde (Northwestern Provinces). English is the official language of Zambia but there are seven local languages used on the national radio and television broadcasting; namely: Bemba, Nyanja, Tonga, Lozi, Luvale, Lunda and Kaonde.

In Zambia, life expectancy at birth is about 39 years. Life expectancy has lowered the Human Development Index in Zambia by 5.9%. More than 55% of Zambians live in towns and cities. Most area of Zambia lies on a high plateau with an average height of 3,500 to 4,500 feet

above sea level. The Victoria Falls situated in the Southern Province attracts tourists. More than half of the country is covered by trees of hardwoods. It is one of the poorest countries in the world and is considered a least developed country. About 70% of the national population is poor. Poverty is more pervasive and widespread in rural than in urban areas. The highest poverty rates are observed in the Northern Luapala, and Northwestern provinces. The lowest poverty rates are instead observed in Lusaka and Southern provinces.

After independence, during 1960s–1970s, large investments were made along the line of rail from Lusaka to the Copperbelt. Services were centralized along this line, and the rest of Zambia kept at a very low level of development. Most of Zambia's agricultural producers are smallholders, who use simple technologies and cultivation practices.

In Table 1 we have included the gross domestic product (GDP), per capita GDP, percentage inflation, ratio of percentage of external debt and GDP and ratio of formal sector employment (FSE) and total labor force (TFL) of Zambia. From the table we see that GDP of the country increases from 1980 to 2003. But per capita GDP and ratio of formal sector employment (FSE) and total labor force (TFL) decrease. On the other hand, percentage inflation and ratio of percentage of external debt and GDP fluctuate.

CLIMATE

In Zambia, climate is a moderate and temperature in summer rarely exceeds 35°C. Rainfall is unevenly distributed throughout the year, with most rainfall occurring within a six month period. December is the wettest month with 231 mm average rainfall. The production of agricultural commodities depends on seasonal weather patterns. It has three seasons as follows:

- (1) A summer rainy season (November to April and October is the hottest) and temperature becomes 18–31°C.
- (2) A cool dry winter season (May to August and July is the coldest) and temperature becomes 9–23°C.
- (3) A hot dry season (September and October and August is the driest).

Average annual rainfall shows a downward gradient from the north to the south of the country, with the highest in the north-west and north-east (above 1200 mm) and the lowest in the south-west (below 800 mm). Zambia is victim of global climate change for last four decades. The irregular rainfalls, floods and severe droughts affect the agricultural products and economics. About 90% farmers of the country are small holders dependent on rain fed

Table 1. Basic economic indicators of Zambia, 1980–2003.

Period	1980	1981–1990	1991–2000	2001–2003
GDP (million US\$)	3,350.05	3,544.3	3,736.8	4,439.5
GDP/Per Capita(US\$)	583.9	522.2	413.3	414.7
Inflation (%)	11.6	50.9	68.8	20.5
External Debt/GDP (%)	84.1	191.4	204.1	173.7
FSE/TLF (%)	23.4	25.0	12.9	8.8

Source: (Koyi, 2006).

agriculture; they remain highly vulnerable to recurrent food insecurity caused by erratic climatic conditions. It is estimated that the climate variability keeps 300,000 people (most of these people live in rural areas) of Zambia below the national poverty line during 2006–2016.

In the 2007-2008 crops season, extensive flooding has caused a steep drop in maize yields from 20 to 60%. Zambia Vulnerability Assessment Committee (ZVAC) estimated that some 440,866 people needed 31,742 MT (metric tons) of food assistance. In this flood about 66% of the road infrastructure of the country had been destroyed.

NATIONAL AND INTERNATIONAL TRADE

Major trading partners of Zambia are the Common Market for Eastern and Southern Africa (COMESA), particularly Zimbabwe, Malawi and DR Congo, South Africa, the European Union (EU) and Japan. Imports come primarily from South Africa, India, Kuwait, China, DR Congo, and the United Arab Emirates (UAE). The main import items of Zambia in 1999 were petroleum (13.2%), iron and steel (16.9%), and fertilizers (13%). Other important import items are chemicals, machinery and manufactures. In import sector, productive machinery for agriculture, books, and pharmaceutical products are tariff free. Raw materials and industrial or productive machinery of non-agriculture face taxes of 0–5%, intermediate goods are generally taxed at a 15% and the final consumer goods and agricultural-related goods taxed 25%. In 2010, 1.4% of Zambia's total imports were from the United States of America (USA). Import items are cereals, telecommunications equipment, machinery, tractors, agricultural equipment and parts, medicaments, medical instruments, chemicals, and mining equipment (Doing Business in Zambia, 2011). In 2010, Zambia imported various items of cost \$5.1 billion.

Zambia's main export markets are Switzerland, South Africa, DR Congo, China, and Egypt. Its export almost entirely was copper since independence in 1964 and up to 1990. The Zambian economy is heavily dependent on copper mining, so that economy is vulnerable on global

copper price fluctuations. Copper and related metals account about 70% of Zambia's exports and its currency exchange rate is strongly related to the price of copper. Its main exports are non-ferrous metals (primarily copper and cobalt), non-metallic minerals, coffee, tea, spices, miscellaneous manufactured goods, and wood products. Recently it has diversified into non-traditional exports. The non-traditional exports are primary products, floricultural products, textiles, processed foods, horticulture, and animal products. The Ministry of Agriculture and Cooperatives (MACO) and Civil Society Organization (CSO) decide to ban or curtail the trade of a certain agricultural product (MACO and CSO, 2002).

In 2010, less than 1% of Zambian exports went to the USA, consisting almost entirely of copper and cobalt. Other exports are precious and semi-precious stones, coffee, honey, spices, and handicrafts. In 2010, Zambia earns \$6.9 billion from total exports. Real gross domestic product (GDP) growth of Zambia in 2010 was 6.6%.

AGRICULTURE

Agriculture is the main occupation of Zambia. Maize is the main staple food (cash crop) of the country. It produces 900,000 to 1,000,000 MT (metric tons) of maize per year. The government heavily subsidized to the production of maize through input provision, credit, marketing and processing of maize. Unfortunately the production of maize deteriorated in the last decade due to climate change and lack of application of modern technologies in agriculture. As a result poverty increases in the country. Zambia became a member of Food and Agriculture Organization of the United States (FAO) in 1965.

In Zambia, staple foods are crops including cereals, such as, maize, sorghum and millet, wheat, and rice and tubers, such as, cassava, sweet potatoes, and Irish potatoes. Smallholder farmers typically plant maize, in mid-November when the first rains start and then harvest in March. Only larger-scale commercial farmers need the irrigation to grow wheat or sugarcane during the dry-season.

Only 14% of total agricultural land of Zambia is being utilized for agriculture. It has an estimated arable land of 75 million hectares. Agriculture generates about 22% of gross domestic product (GDP) and provides direct livelihood to more than 50% of the population. The agricultural sector employs 67% of the labor force and it is the main source of income and provides employment for women who make up 65% of the rural population. More than four out of five members of Zambia's labor force (about 5.4 million) engaged to the production of agricultural commodities. Rural poverty remains high due to low rates of literacy, especially among women; poor access of smallholder farms to roads, storage facilities, and market information; and the devastating impact of diseases such as HIV/AIDS and malaria.

The main agricultural products of the country are maize, tobacco, cotton, rice, wheat and groundnuts. The Central and Eastern Provinces are cotton production areas. The other agricultural products are sorghum, vegetables, citrus fruit, bananas, pineapples, mangoes, avocados, grapes, tea, coffee, sunflower seeds and sugarcane.

The main causes of poverty and less food production in Zambia are:

- (i) The irrational supply of fertilizer, insecticide and seed in the market.
- (ii) Drought in the cultivation season and insufficient facilities of irrigation.
- (iii) Losses of cattle of farmers by the various diseases which are used to plough the land.
- (iv) Loan provided by the Structural Adjustment Programme (SAP) are of high interest rate and poor farmers cannot borrow money for food production.
- (v) Lack of credit facility for small and marginal farmers.
- (vi) Prevalence of HIV/AIDS among farmers.
- (vii) Unsustainable farming practices that have degraded land and soils.
- (viii) Poor invest of the government in the agriculture sector.
- (ix) Poor application of modern cultivation system.
- (x) Lack of research in cultivation.

It is estimated that about 600,000 MT of cereal is being imported into the country to meet food needs. In 2002-2003, the millers were to import 300,000 MT and the government was to import 155,000 MT. There are three troubled areas of infrastructure into Zambia's agricultural economy. These are as follows:

- (a) Feeder roads, which have been neglected to the extent that many are impassable, and affects the agricultural sector.
- (b) Post-harvest storage, which do not meet the needs of farmers in rural areas.
- (c) Price information about market prices is poorly

managed and difficult to access for the marginal farmers.

Zambian Agricultural Research Institute (ZARI) is Zambia's state agricultural research centre with fairly large, well-equipped laboratory. Its head quarter is at Mount Makulu, about 20 km south of Lusaka. ZARI is responsible for analyzing and assuring the quality of agricultural and veterinary chemicals and fertilizers.

CHANGING ECONOMIC SITUATION

Zambia became independent in 1964; from then it was one of the most prosperous country in Africa. It has sufficient arable land, water and mineral resources for sustainable economic development. After 1975, Zambia faced various difficulties such as fall of copper price, political turmoil in neighboring countries and severe effects of the first oil shock. Government borrowed heavily to keep the economic situation normal but failed.

In Zambia, the real export price of copper fell sharply during the 1970s and has never fully recovered. This is because, more efficient copper mines in Chile, Papua New Guinea developed in the mid-to-late 1970s and Zambia lost its status as a medium cost supplier. On the other hand, the shift to fiber optics and wireless technology in the communications sector began to generate huge copper scrap each year. After the end of the Vietnam War and the development of hard plastic, cannon shells sharply reduced the amount of copper used in the defense industry. The use of copper in the auto industry in the USA decreased due to modifications to automobiles.

In December 2000, Zambia's external debt became \$6.3 billion. The causes of poverty are mainly from two factors: i) internal factors, and ii) external factors. External factors are drought, flood, decline of trade, etc. in which the country has very little control. Internal factors are cultural factors, over-dependence of the economy on copper, the failure of structural adjustment programmes to generate the desired economic growth, and disease like HIV/AIDS, etc. Corruptions in government and lack of proper measures to monitor public resources have been cited by civil society as other major causes of poverty in Zambia.

At present Zambia is among one of the poorest nations in the world. The World Bank classifies it as a least developed and a severely indebted low-income country. The United Nations Development Programme (UNDP) Human Development Report 2001 ranks Zambia 143 out of 161 countries. Prices of maize and other staples have risen by over 25% and fuel by over 37% since January 2007. Average inflation rate is about 7.9% per year.

In 2008 one major mine closed and production in a number of others was scaled down significantly due to lower price of copper. It is estimated that 8,100 people

lost jobs in the copper industry in 2008 and the unemployment increased in the country (Ndulo et al., 2010). The food crisis ascribed to a complex combination of unfavorable weather pattern, poor health standards and unfavorable socio-economic conditions and high prevalence of HIV/AIDS. The HIV/AIDS pandemic has also had some effect on agricultural production and productivity. About 70% of the populations live below the poverty line (less than \$1.00 a day or unable to afford to buy food providing a daily intake of 2,122 kilocalories) and suffer from other deprivation such as little access to social services and poor quality of the services (Samatebele, 2003).

In Zambia about 58% of the populations are characterized as extremely poor, and approximately 70% of the population has difficulty accessing basic social services (United Nations Development Programme, UNDP, 2003). Poverty is more prevalent in rural areas (83%) compared to the urban areas (56%) but poverty has risen faster in urban areas lately due to deteriorating industries and rising unemployment. About 23% of all households are headed by women and about 20% of all children under-19 years are orphans. Most of the rural poor are small-scale farmers with low productivity which is one of the main causes of poverty in the country. More females (39%) than males (16%) are employed as unpaid family workers. In Zambia, rural households spend nearly three-quarters of their budget on food, and a high percentage of this is for in-kind home consumption. About one-quarter of all children born to the very poor and other vulnerable groups do not live past their fifth birthday.

The rural transportation network is largely undeveloped and communication costs are very high in Zambia, which affects the agriculture and economy of the country. Overall, poverty in rural areas has increased significantly during the 1990s. During 1996-1998, poverty levels among medium scale farmers increased from 65.1 to 71.9%. The poor are selling their household assets to buy cheap rate available foods. To mitigate hunger they are paying more but are getting less. To survive, some are engaged in high risk sexual activities, such as prostitution, which are increasing HIV in the country.

Apart from minerals and forests, the country is also richly endowed with fish and wildlife resources. Zambia was economically prosperous during the independence in 1964, due to the thriving copper industry and agricultural production.

FOREIGN DIRECT INVESTMENT (FDI) IN ZAMBIA

Foreign direct investment is very low in Zambia. There is a transparent discrimination against foreign investors in Zambia. The foreign investors have opportunities to invest in telecommunications, transportation services and equipment, electrical power generation, distribution, and

transmission equipment, mining and mineral processing equipment, agriculture extension services providing seed and chemicals, food processing and packaging, tourism infrastructure service, healthcare services chemicals, road and rail construction, etc. sectors. Recently only a few US companies have a significant presence in Zambia. The US companies take permission investing mainly in restaurants, pharmaceutical and hardware, non-luxury hotels and Internet Service Providing.

The US companies have opportunities to invest in large and small-scale energy generation and distribution projects, particularly those that supply electricity to manufacturers, mining companies, and farming blocs. Zambian government gave opportunities to the investors in energy sector to carry forward tax losses for ten years. A large portion of Sub-Saharan Africa's water resources pass through Zambia, there is significant untapped hydropower potential to not only meet domestic demand but also to export to Eastern and Southern African countries.

Under the terms of the new Zambia Development Agency (ZDA) Act, foreign nationals who invest \$250,000 and employ a minimum of 200 persons are entitled to self-employment or resident permits. With an approved investment license, these investors are also eligible for up to five expatriate work/resident permits. If any foreign company plans to invest in Zambia, they should obtain an investment license from the ZDA to take advantage of its services. The procedure is simple and licenses are approved or disapproved within 30 days.

IMPACT OF FOOD SECURITY AND HEALTH

Malnutrition is a chronic and difficult problem in Zambia. Minimum energy requirement in Zambia is 1,800 Kcal/person/day. In 1999-2002, Zambian dietary energy supply was estimated at 1,900 Kcal/person/day, which is below the recommended per capita level of daily caloric availability, 2,100 Kcal, and slightly above the minimum intake level of 1,800 Kcal (Benson, 2004).

According to the Food and Agriculture Organization (FAO), 49% of the Zambian population is undernourished and unable to manage minimum energy requirement. About 50% of children aged 3-59 months were stunted in Zambia. Urban children have better nutritional status than those in rural areas. About 42% of children in urban areas were stunted, compared to 53% of children in rural areas. Malnutrition causes Zambia's high rates of morbidity and child mortality compromising their cognitive development, immunity, and physical growth. In Zambia, the health system suffers from poor integration and coordination of health programmes which end up competing for attention from health workers.

Increased hunger reduces people's ability to fight against diseases. The government is not in the position to

provide basic drugs and services sufficiently. HIV/AIDS, tuberculosis (TB) and malaria are fatal diseases in Zambia, and treatment facilities of these diseases are limited. Malaria accounts for 36% of hospitalizations and outpatient attendance nationwide. A recent World Health Organization (WHO) impact assessment found that since 2007, deaths due to malaria have declined by 66%. Zambia has one of the world's highest incidence rates of TB (353/100,000 in 2010) and the seventh highest HIV/TB co-infection rate; up to 70% of all new TB patients are HIV/AIDS positive and TB cure rates are high at 86% (Global Health Initiative Strategy Zambia, GHISZ, 2012). Illness of an individual of a house results in the loss of jobs, the sale of assets, the collapse of traditional safety nets and falls in standards of living and quality of life. Health problems have a direct impact on productivity and human capital in Zambia.

Of the nine provinces in Zambia, under-five mortality rate is the highest in Luapula province. In 2002, the under-five mortality rate in Luapula province stood at 248/1000 and more than 30% children does not live to celebrate the fifth birthday. More than 90% of Zambian women receive some antenatal care, yet only 47% of women deliver in health facilities and 46% have assistance of a skilled health provider. Each district is expected to have a hospital, staffed by one or more physicians; however, currently 13 districts have no hospital. On the other hand, fertility has increased since 2002, from 5.9 to 6.2% in 2007; rural fertility is 7.5%, which is the highest in the world. Modern contraceptive use is 33%. The most commonly used methods of contraceptive are use of pills and Depo-Provera injections.

There is a positive correlation between nutrition and HIV/AIDS. Malnutrition and HIV/AIDS have a direct effect on the immune system, impairing people's ability to resist and fight infection. The effects of poor diets on HIV/AIDS are given as follows (Overseas Development Institute, 2008):

- (a) HIV-positive people with poor diets develop AIDS more quickly.
- (b) HIV-negative people with poor diets are more susceptible to infection and have reduced immunity to HIV.
- (c) People with AIDS have increased nutritional requirements and poor diets worsen the disease.

In Zambia, some public health services provide anti-retroviral drugs (ARVs) free of charge. Anti-retroviral Therapy (ART) is linked to adequate food and nutrition and that people on ART who receive food supplementation recover much faster (Samuels and Simon, 2006; Edstrom and Samuels, 2007).

The number of HIV/AIDS positive individuals may increase as the number of people on anti-retroviral

(ARVs) increases, there are fewer HIV/AIDS related deaths, and the population continues growing.

In Zambia the mortality rates are among the highest in the world. Infant mortality rate is 11.2% live birth in 1999 and maternal mortality rate is at 0.90%. The HIV/AIDS became pandemic in the 1990s due to lack of health conscious. As the HIV/AIDS infected more among the very poor, they are quite unable to take medical treatment. These patients become burden to the family and the country, as a result human capital of the country is not improving. At present in Zambia death rate is about 23% due to HIV/AIDS. Most of the HIV/AIDS infected people are of young generation and the country has already lost large numbers of its young and productive people. HIV/AIDS infected even among the health conscious people, such as doctors, nurses, teachers and highly educated people. Adult HIV/AIDS prevalence remains higher among women (16.1%) than men (12.3%) and higher in urban areas (19.7%) than rural areas (10.3%).

It is estimated that 13% of all Zambian children are orphaned as a result of HIV. The number of orphans has increased to over 600,000. The number orphans is higher in rural areas and other areas where the incidence of poverty is very high. Orphan HIV/AIDS infected children suffered much, as nobody want to give them shelter due to risk of infection of this fatal diseases. Malnutrition rates for under-five are high with 53% stunting, 24% under weight and 5% wasting nationwide.

The common nutrition problems in Zambia are Protein-Energy Malnutrition (PEM), micronutrient deficiencies and low birth weight. PEM is presented as stunting, wasting, underweight and low birth weight, while micronutrient deficiencies include vitamin A deficiency, iron deficiency anemia and iodine deficiency disorders. According to the Zambia Demographic and Health Survey, 10% of all women of reproductive age have a low Body Mass Index (BMI). About 9% of Zambian mothers of children below 3 are also malnourished with a BMI of less than 18.5. It is estimated that between 10 and 13% of children born in Zambia have a low birth weight indicating poor maternal nutrition. Poverty tends to be higher in orphans, street children and children who are household heads.

The 2007 Zambia Demographic and Health Survey (ZDHS) shows that Zambia's infant and under-five child mortality rates have both declined significantly since 2002, yet they remain high at 70 and 119 deaths per 1,000 live births, respectively (GHISZ, 2012).

At the provincial and district levels, Provincial Health Offices serve as an extension of the Ministry of Health (MOH). MOH is actively trying to recruit more doctors and nurses, yet it faces numerous constraints such as a high national wage bill, limited financial approval for new positions, and shortage of staff with the required training and experience. The Churches Health Association of Zambia (CHAZ), parastatal organizations, private clinics,

and traditional healers provide health care in addition to the MOH. CHAZ also supports health programmes, pharmaceutical services, and institutional development activities, and leverages resources for the collective procurement of drugs and other health-related commodities for its member facilities. Private mining companies provide preventive and curative medical services for their workers and dependents (GHISZ, 2012).

US HEALTH PROGRAMMES IN ZAMBIA

The US Government's (USG) health programmes support Zambia's National Health Strategic Plan to combat malaria and tuberculosis; improve maternal and child health; promote family planning and reproductive health; and prevent HIV and provide care and treatment for those already infected with the virus. The USG also supports a comprehensive approach to the Government of Republic of Zambia (GRZ)-led national response to HIV/AIDS, focusing on the initiation, improvement, and scale-up of prevention, testing and counseling, prevention of mother-to-child transmission, antiretroviral therapy (ART), male circumcision, management of opportunistic infections, palliative care, laboratory services, and logistics and supply chain management. The President's Malaria Initiative (PMI) is a core component of President Obama's Global Health Initiative and Zambia is one of 19 focus countries supporting interventions covering virtually the entire country. The USG supports Zambia in achieving TB control goals through financial and technical assistance, including participating in technical working groups that oversee the implementation of the National TB Strategic Plan of 2011–2016. Since up to 70% of Zambia's TB-infected individuals are also infected with HIV, all USG-supported activities targeted at TB control also contribute to HIV prevention and care efforts (GHISZ, 2012).

The USG assistance supports a range of GRZ's interventions to improve maternal, newborn, and child health. The attempts are improving access to skilled attendance at birth and emergency obstetric and newborn care, increasing immunization coverage, expanding access to child illness treatment through community-case management and facility-based integrated management of childhood illnesses, making clean drinking water available, and maintaining polio surveillance. The USG will also support the MOH in the implementation of the new community health worker strategy to increase the number of community health workers available to deliver community-based services. Zambia is the first country to launch "Saving Mothers Giving Life", which aims to reduce maternal mortality by 50% in just one year in the four chosen districts (Lundazi and Nyimba Districts in Eastern Province, Mansa District

in Luapula Province, Kalomo District in Southern Province).

Education is the back bone of a nation. The countries with high literacy rates among men and women have lower levels of fertility, more wealth and income distribution, lower infant and maternal mortality, better health outcomes, and longer life expectancy (Ojiambo, 2009). About 16% children of Zambia drop out from school due to inability to afford school costs by the parents. They are engaged into informal labor to earn food and cash, or fetch water, collecting firewood, etc. In some cases children are too weak to cover long distances to school because of hunger and school feeding programmes are not in place to provide supplementary meals to school going children. Women in Zambia have lower rates of literacy and numeracy than men, and have lower incomes and less access to cash.

EMERGENCY FOOD AID

The government of Zambia declared a disaster in May 2001 and requested for external assistance from the donors. The United Nations Development Programme (UNDP), World Food Programme (WFP), United Nations Children's Fund (UNICEF), Food and Agriculture Organization (FAO) and World Health Organization (WHO) produced the United Nations Emergency Consolidated Appeal (CAP) to address the food insecurity crisis in Zambia in July 2002. The CAP wanted funding of \$71.39 million for emergency food assistance, and to supply aid in health, education, water and sanitation, child protection and food production. The assistance would target 1.71 million beneficiaries affected by the food crisis in the rural sector with the distribution of 224,000 MT of relief food (Samatebele, 2003).

The Zambia Emergency Food Security Assessment conducted by a collaboration effort involving government, The United Nations (UN) Agencies, Non-government Organizations (NGOs) and Southern African Development Community (SADC) officials and estimated that 2.3 million people were in need of humanitarian assistance for the period August 2002 to March 2003. The worst affected were the rural vulnerable groups, child and female headed households, households keeping the disabled, the sick and widows not supported by other households. Significant numbers of these households contain orphans and other vulnerable children affected by the HIV/AIDS pandemic (Samatebele, 2003).

World Food Programme of the United Nations' (WFP) country programme focused on most poor rural areas and planned providing food aid to about 555,000 people (July–December 2006) under a Protracted Relief and Recovery Operation. WFP school-feeding activities provided daily meals to over 185,500 vulnerable school children. WFP also provided food aid to 69,000 refugees

from Angola and the Democratic Republic of Congo who lived in camps and settlements in Zambia, and relied on WFP for their basic food needs.

Food ration in Zambia is received in each month by the extremely poor. The aid includes wheat, soya beans, beans, peas, cooking oil, maize, eggs and dried fish. They share this food with their family members and some with neighbors, friends and others in their livelihood network. Some sell their food rations in order to buy other foodstuffs. Some poor feel stigma when queuing for food supplementation. This food rationing is not continuous in Zambia. Some foods, such as wheat, caused health problems and feel difficulties in food preparation.

The most vulnerable groups are selected to food insecurity and poor nutrition. The individuals of this group in Zambia are young children, pregnant and lactating women, people living with HIV/AIDS, orphans and vulnerable children.

CONCLUSION

In this paper we have discussed the declining economy of Zambia and its impact on the country's food security. When Zambia became independent from Britain in 1964, it was one of the prosperous countries in Africa. Then the country's full economy depended on copper export. While the population has grown rapidly, maize production has decreased due to drought and flood, and the country faces an economic crisis. Since 2002, it is importing its staple food maize every year. At present in Zambia death rate is about 23% due to HIV/AIDS and most of the HIV/AIDS infected people are of young generation. The number of orphans has increased to over 600,000. Rural poverty remains high due to low rates of literacy, especially among women. The government of Zambia should increase funds on education. Zambia has two highly attractive options to revitalize its economy. The first one is to apply modern technologies in the copper

mines to bring their output to levels approaching those achieved in the early 1970s. The second one is to take advantage of export of the livestock to the Asian meat market. The government of Zambia declared a disaster in May 2001 and requested for external assistance from the donors. We hope the country will revive its economy in the near future.

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