Comparative Analysis on Food Security between Kenya and Zambia

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Abstract
Food security, a vital determinant of overall health and well-being, hinges on the simultaneous achievement of four dimensions: physical availability of food, economic and physical access to food, utilization of nutrients, and stability over time. This paper explores the complex and multi-faceted food security situations in Kenya and Zambia, emphasizing key factors such as agricultural production, government policies, and socio-economic conditions.

Keywords: Food Security, food supply, hunger, Integrated Food Security Phase Classification, malnutrition

1. Introduction

Food security is very vital as it is used to determine their accessibility to nutritious foods which in turn affects their general health and well-being. It is defined as the state in which all people have access, both physical and economical, to foods that are safe, sufficient, and have nutritious value that meets their dietary needs and food preferences for a healthy and active life. [1]
For the realization of food security to occur in any given country, the four dimensions of food security have to be achieved simultaneously. The physical availability of food is the first dimension, and it is mainly concerned with the supply when it comes to food security. [2] Economic and physical access to food addresses issues regarding whether those at the household level can afford the physically available food. Food utilization focuses on whether the individuals can adequately make good use of the nutrients found in the food while the last dimension is the stability of the three dimensions over time. [3]
There are two general types of food security; chronic food security which is long-term and transitory food security which is short-term. The two categories mainly tackle the duration in which food security issues are faced. [4] To understand and evaluate the severity of the issue, the Integrated Food Security Phase Classification (IPC) is utilized. It refers to a classification system for food security crises based on a range of livelihood needs (Figure 1).
The food security situation in Kenya and Zambia is a complex and multi-faceted issue, influenced by a range of factors including agricultural production, government policies, and socio-economic conditions. While both countries have

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made progress in improving food security, there are still significant challenges to overcome. [6]

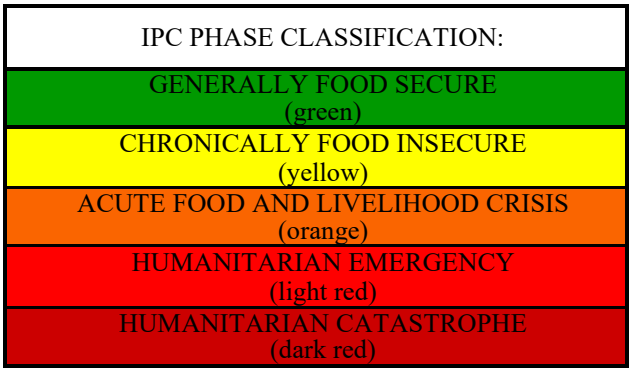

Figure 1. The IPC phase classification system
Source: [4]

Other important terms to note that are interrelated with food security include hunger, malnutrition, and poverty. (Figure 2)

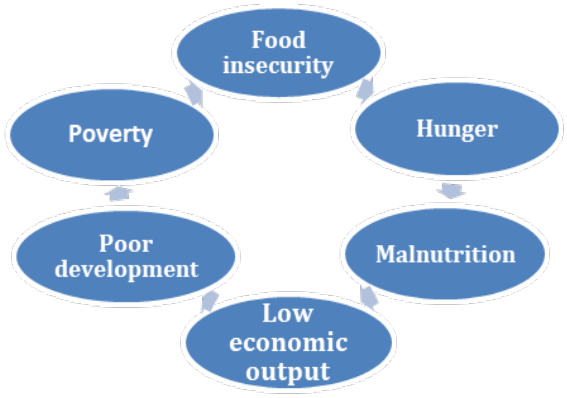

Figure 2. Food insecurity cycle
Source: Authors interpretation by [5]

Kenya and Zambia are two African countries located in Sub-Saharan Africa that are facing significant challenges in ensuring food security for their populations. Their greatest challenges are in poverty, food insecurity and lack of access to affordable and healthy meals. [7] Both countries have experienced economic and political instability in recent years which has impacted their ability to produce and distribute food. In addition, both countries are highly vulnerable to weather related disruptions. The two countries are also urbanizing very fast due to the weaker links between urbanization, economic growth and structural transformation. [8]

2. Materials and methods

The main objective of this paper is to highlight the situation of food security, respectively food insecurity, in Kenya and Zambia. The research is based on second and third party data provided by Our World In Data and Food and Agriculture Organization of the United Nations.

3. Results and discussion

In Kenya, even though there is great improvement in the level of nutrition, the situation is still dire. It is as a result of the increase in response in an attempt to address malnutrition which in turn has helped improve the issues related with food security. [9] This is through the accessibility and availability of food stocks and milk which came about due to long rains. The arid areas in the country are the ones that are greatly affected due to lack of clean and safe water for consumption and low amounts of food. [10]

Zambia is home to 20,299,441 people, according to statistical data obtained during the August 2023 census exercise. The population has increased by 10% since August 2022 when it was 19,610,769. Unfortunately, this population growth does not align with the economic situation in the country. In Zambia, maize grain and maize meal are the most critical food security indicators. In the past one year alone, maize grain prices have increased from $235 per tonne in February 2022 to $238 per tonne in february 2023. This increase in the prices of maize grain prices directly affects the prices of maize meal which is the main food item in Zambian households. [11]

The study found that Zambia had higher levels of food insecurity than Kenya overall, based on the statistical data collected during the survey and presented in this paper. It is presented the level of severe food insecurity and the level of moderate to severe food insecurity respectively for both countries for the periods 2020 to 2015. Also, it is presented a representation of malnutrition related to death for both countries for a period of 19 years. It is also shown the comparative differences in the levels of severe food insecurity in the total population on a 3 year average period, and comparative differences in the levels of

malnutrition related deaths between the two countries for the periods 2000 to 2019.

The insufficient quantity consumption of food is referred to as severe food insecurity. It is given a visual representation of comparison of the share of the total population in Kenya and Zambia who have experienced severe food insecurity. For both countries, 2020 had the highest number of those affected with figures of 26.10% in Kenya and 32.60% in Zambia. Through the years, Zambia has had the highest number as compared to Kenya's population of those experiencing severe food insecurity. The lowest year was 2015 with a percentage of 15 in Kenya and 22.40 in Zambia and both have a steady increase since then. (Figure 3)

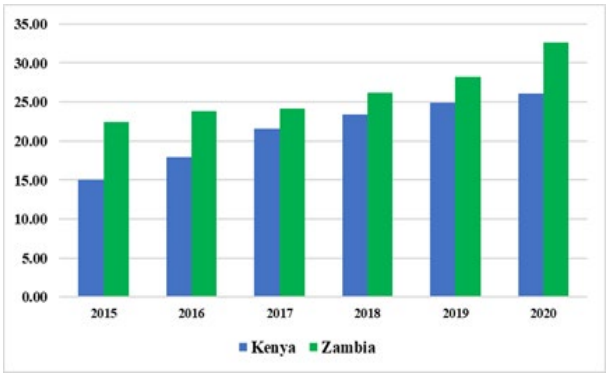

Figure 3. Prevalence of severe food insecurity in the total population in percentage between Kenya and Zambia (%)
Source: Authors interpretation by [12]

To continue, it is presented a comparison between Kenya and Zambia with regards to the share of the population that have undergone moderate or severe food insecurity. For both countries, 2020 recorded the highest levels of those affected by this due to the pandemic which took a toll on the levels of food distribution leading to some people going without food or not receiving the nourishment required. Through the years from 2015-2020, Kenya has had the highest percentage of those experiencing moderate or severe insecurity as compared to Zambia. In 2016—2017, Zambia had a drop in the number of those in the population who were affected. Kenya has had a steady rise through the years. The lowest month for the countries were 2015 in Kenya and 2017 in Zambia with percentages of 35.70% and 27.90% respectively. (Figure 4)

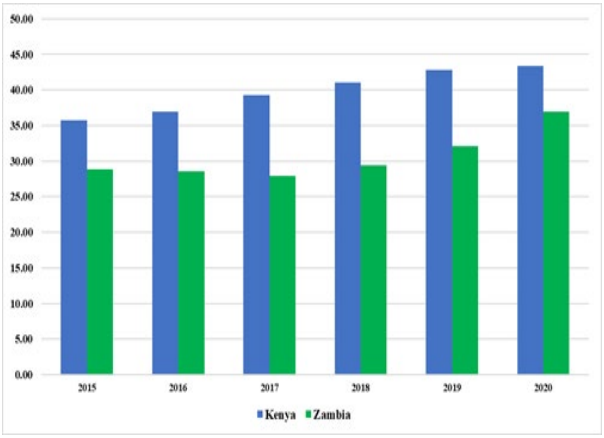

Figure 4. Share of population with moderate or severe food insecurity (%)
Source: Authors interpretation by [12]

Figure 5 shows a comparison of malnutrition related deaths between Kenya and Zambia for the periods 2000 to 2019 per 1,000 of the population. It can clearly be seen from the graph that the death rates for Zambian were much higher than those of Kenya throughout in the periods analyzed. For both countries, the death rates were highest in the year 2000 and gradually reduced over the years with the lowest death rates for both countries recorded in the year 2019. (Figure 5)

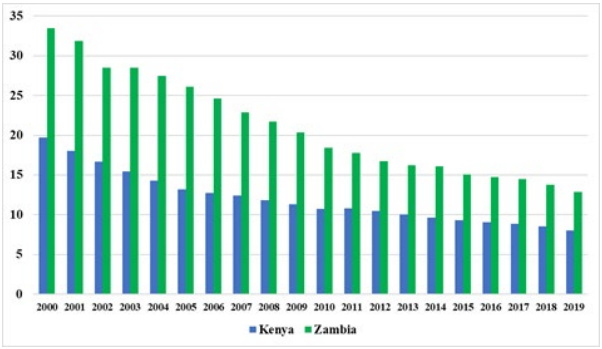

Figure 5. Death rate per 1,000 people due to malnutrition
Source: Authors interpretation by [12]

In the end, there are presented the comparative differences of moderate and severe food insecurity in the total population (3-year average), and malnutrition related deaths (from 2000-2019) between Kenya and Zambia. (Figure 6)

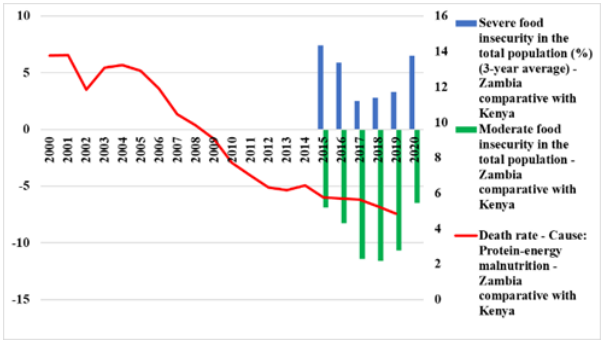

Figure 6. Comparative differences-moderate and severe food insecurity, malnutrition related deaths
Source: Authors interpretation by [12]

4. Conclusions

The aspect of food security in any given country should be taken into consideration with the seriousness it deserves due to the negative implications that can occur depending on the severity of the situation in the country. Kenya and Zambia are among the developing countries in Africa but major organizations like FAO have put policies and measures in place to assist with the food security aspect in both countries. [13] The improvement of this area can have a positive influence in the given population's quality of life and its economy as a whole. Cases such as malnutrition in children and their deaths caused by this issue will be greatly reduced if the levels of food security are to improve. [14] COVID-19 took a toll on both Zambia and Kenya as a majority of those who were employed lost their livelihood and therefore could no longer have easy access to the nutritious foods and this greatly affected their diet. Though there is still a lot of room for improvement, both countries are making strides in an attempt to better the situation for their respective populations. [15]

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