

# Chapter 11

## DOES GLOBAL HUNGER TEND TO DECREASE?

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### INTRODUCTION

The Global Hunger Index is a multidimensional measure that is used to demonstrate a country's hunger state. It gives information about the global hunger progress and failures. The 2018 Global Hunger Index, published by Welt Hunger Hilfe, indicates that the world's hunger problem was drastically reduced in the last two decades, but despite this optimistic picture, the world's hunger or malnutrition problem continues to be a serious issue. According to the index, hunger continues to be a threat at the "serious", "alarming" and "extremely alarming" levels in 51 countries. The Global Hunger Index (GHI) is a parameter, which evaluates the countries' hunger level. It also shows the changes in the global hunger level of countries over time (BBC, 2009), (The Washington Post., 2015), (Global Hunger Index, 2016). This index is updated yearly. The Index was created by the International Food Policy Research Institute (IFPRI), and published in 2006 with a German non-profit association (NPO) which is called Welthungerhilfe. Irish NGO (Concern Worldwide) participated in this group in 2007 as co-publisher (Victoria et al., 2008,2010). 12<sup>th</sup> annual report of the Global Hunger Index (GHI) published in 2017 gives valuable information about the national, regional, and global hunger. According to the report of (GHI), the hunger rate has been decreasing significantly since 2010. Even though the progress achieved for long term in reducing world hunger, the 2017 report shows that there are still millions of people faced with chronic hunger, acute food crisis and famine. The overall score of GHI in 2017 was 27 percent less than 2000 but also the progress made was not even. However, in 119 countries, which have been assessed in the report of 2007, one country falls in the range of extremely alarming score according to GHI Severity Scale. 7 countries are in the range of the alarming level while 44 are in the range of serious level with 24 of them in the range of moderate level, while 43 countries are having a low level. In the world, the most struggling regions with

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The matrix in Table 4 can be written as a vector as shown below:

This vector gives the expected probability distribution of the global hunger index for 12 periods.

The classification of the data and the calculations are made using Excel IF function.

## **CONCLUSION**

In this study, we used the global hunger index data for four periods of time between 2000 and 2018. First order Markov chains have been applied to the transition of the categories of the global hunger index in 51 countries, which have the high hunger index with  $GHI \geq 20$ . The countries with low hunger index are excluded from the study. The steady state probabilities of the global hunger index and probability distribution of the 2018 are compared. Steady state estimations suggest that countries with high hunger indexes tend to transit to lower indexes in the long run. 96% of these selected countries will have a global hunger index at a serious state, 4% in alarming state and almost none in the extremely alarming state. The overall percentages of the countries classified with alarming and extremely alarming states are expected to decrease 60% and 100% respectively in 12 periods. In addition, the percentage of the serious state is expected to increase 9,2%. These results show that there will be a progress to reduce global hunger in the future.

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