

Need for stringent food safety and nutrition laws in developing countries

Mr. Soumyadeep Chakrabarti,

Ph.D. research scholar at GITAM University.

Abstract

The current research is based on the safety of food and nutrition laws in developing countries. The main objectives of the research such as the importance of the safety of food legislation in developing countries, the elements of a good national food safety system, the barriers, and gaps in the implementation of the safety of food legislation in developing countries, and the importance of the policies and programs for nutrition are discussed. The application of legislation for the safety of food is an essential concern to maintain the quality of food. Several challenges to the safety of food are reduced by the execution of food safety legislation in a developing country.

Keywords

Food safety legislation, nutrition laws, national food safety system, international nutrition system, developing country.

Introduction

In the current research need for the safety of food and nutrition laws will be discussed. The aim and objectives of the research will be mentioned in the study. The importance of food safety Legislation in developing countries will be mentioned in the current research. Some components are important to maintain the safety of food. Those components will be described briefly in the mentioned study. Several barriers to the implementation of this food safety legislation will be

found in the study. The importance of the micronutrients in food to increase economic growth will be discussed in this research. The method of collecting the data and the analyzed data type will be mentioned in the study.

Aims and objectives

Aims: The current study is aimed at the need for stringent food safety and nutrition laws in developing countries.

Objectives:

- To analyse the importance of food safety legislation in developing countries
- To analyse the elements of a good national food safety system
- To analyse the barriers and gaps in the implementation of food safety legislation in developing countries
- To analyse the importance of the policies and programmes for nutrition

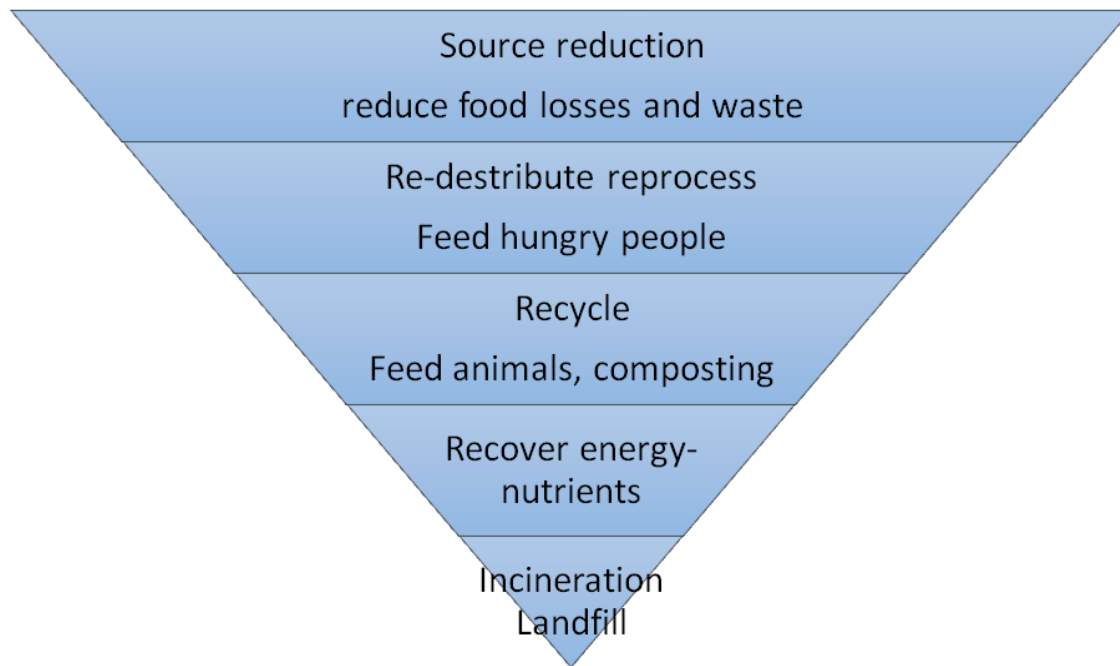
Literature Review

Importance of food safety legislation in developing economics

Developing nations bear a significant global burden for food-borne illness and fatalities. Trade on a regional and global scale is now becoming incredibly valuable. These factors make paying more attention to food safety the most important issue. It becomes essential for the development of a sustainable economic system, for maintaining good health, and for productivity (Imathiu et al. 2020). It also connected with a happier population who would enjoy decreased conflicts. Developing countries have some legislation regarding the safety of food. Food safety legislation is an important concern to develop the good health of the people of the country and also in the growth of the economic system. The implementation of food safety legislation helps to increase

the percentage of the growth of the annual economic system of the country. In research, it is detected that the growth of economic systems throughout the world is increased by around 5% in the recent decade and it is predicted that the improvement will be continued in the next couple of years.

Figure 1: Food security, safety, and sustainability



(Source : Created by Soumyadeep Chakrabarti)

Wealth and prosperity among the populace are big reasons to increase the demand for high-quality, safe and long-lasting products (Liu et al. 2019). The developing economic system is a huge operator of the raw and semi-processed goods of agriculture and it is put directly under these legislations requirements. The standard of safety of food exists almost in every country now but these regulations cannot help the safety of food because of two important reasons. The reasons are sometimes the imports of poor-quality foods are not shortened due to corruption, incapability or laxity. Some of the regulations are not maintained as per the requirements which

creates hindrances in the food safety process. The low level of implementation of the regulations is another reason to make hazards in the food safety process. For these reasons, three major models are adopted by several countries to maintain the safety of food.

The first model is applied in the body of one organisation authorized with all of the functions which can control the safety of food (Shukla et al. 2018). This model has the advantage to prioritize the issue of food safety and it is highly effective for those issues. Multiple agency scenarios are implied by the second model. Some challenges such as duplicity of functions, conflicts, and differences in expertise are reduced through the implementation of this model. The third model is a non-segregated system. All the sectors are cut across by this such as education, training, inspection, coordination, and policy development.

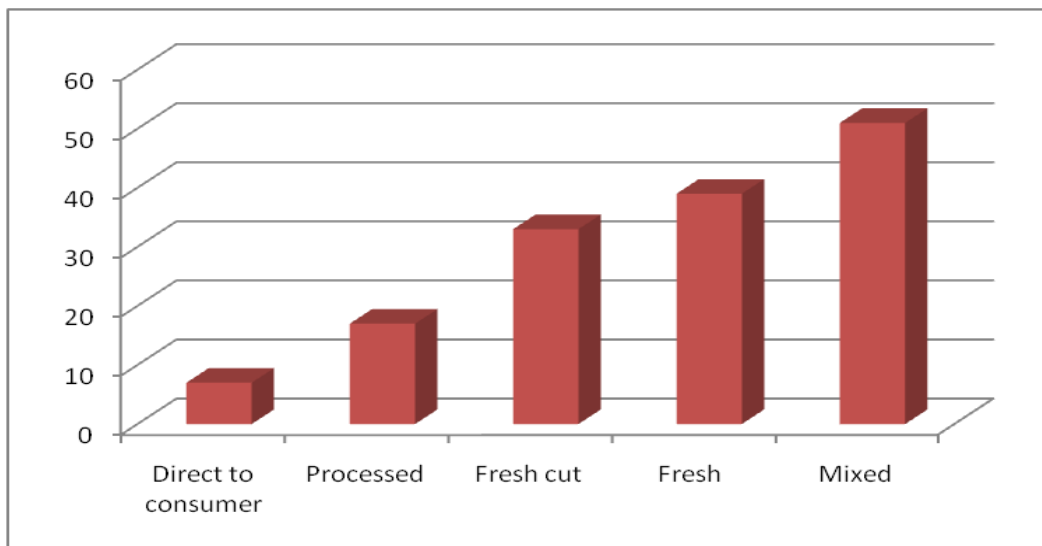


Figure 2: Percentage of produce growers conducting food audits by marketing channel, 2015-2016

(Source: Created by Soumyadeep Chakrabarti)

Elements of a good national food safety system

Several components are important to manage the food safety system. The elements include a national food safety policy, food laws, a platform for developing national food standards, science-based risk assessment, inspection, laboratory testing services, capacity, education and training in food safety, epidemiological surveillance, and membership in the Codex Alimentarius Commission. These elements are necessary to regulate food safety (Chiwona-Karlton et al. 2021). National food safety policy provides a general direction for the food industry of the country. The food safety policy is essential to coordinate the functions of all organisations and the responsibility to deliver food safety. Government should demonstrate the relationship between food safety and the economic system and health. The food safety policy is adopted to give accurate accompanying legislation. The legislation should be updated and based on science. The legislation is implemented to increase the food value chain. In the developing world, there is a great variety of indigenous foods.



Figure 3: Guidelines for developing countries to modernize their food safety process

(Source: Created by Soumyadeep Chakrabarti)

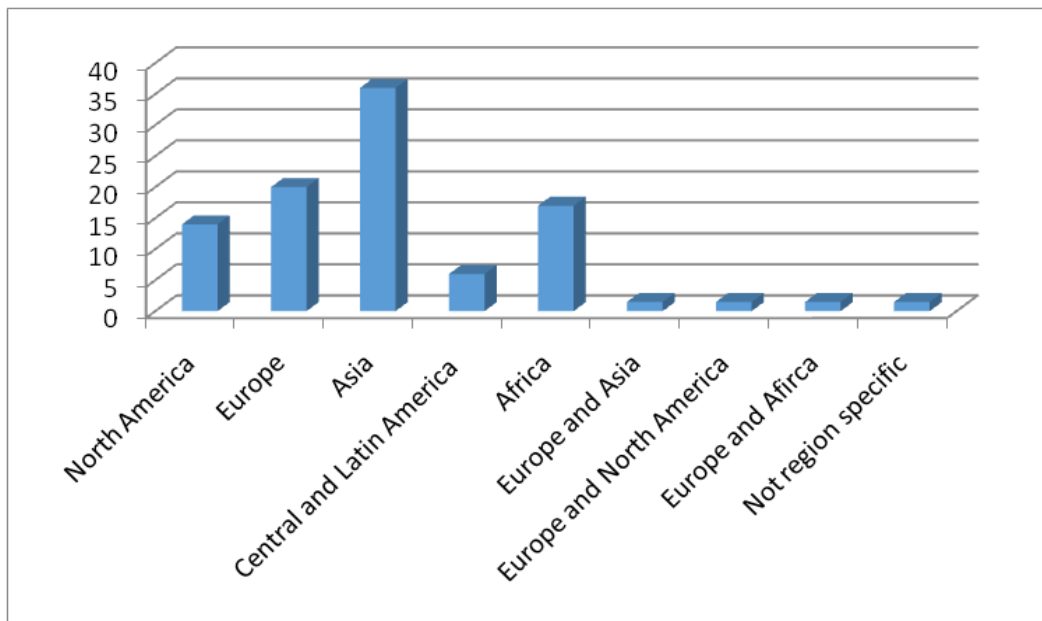
In several countries, there have no standards for the trade and preparation of that indigenous food. The Codex Alimentarius Commissions' working groups currently put efforts to change this. This step should encourage the countries to bring their native foods to the table (Sirma et al. 2018). The scientific data on nutritional and several safety aspects of food is supported by the standards development process. This gap needs to be filled. The standard development process should respond and be internationally connected. The inspection of food quality finds out the success or the failure of the legislation of food safety. The inspection of the legislation helps to know whether the implementation of the legislation is properly followed or not as per the requirements. It also inspected the quality of the food which is helpful for food safety. It helps to develop food safety. Many factors of the inspection process find out the benefit of the implementation of food safety legislation (Schleifer et al. 2020). Many characteristics of monitoring the safety of food depend greatly on substantiation which is conducted by the testing process of samples.

Barriers and gaps in the implementation of food safety legislation in developing countries

There are several numbers of factors that make difficulties in the implementation of the safety of food legislation properly in developing countries. Minimal implementation of HACCP in food processing in several industries is a reason for the hinder to the work of food safety legislation. The execution of HACCP in food processing is not a compulsory demand. On the other side some multinationals and special food chains, especially the export-oriented ones adopt HACCP in their food processing system to the demand of their customer. This application of HACCP in

their food processing system makes several hazards that create several barriers to the application of food safety legislation in developing countries.

Developing countries should understand and appreciate the fact of the safety of food management systems and the benefits which are getting through the application of food safety legislation (Kim et al. 2020). The multinational companies of developing countries are very strict in their food safety management system. Their focus is on the inner standards and their techniques. The inspection of their products and proper monitoring of them are done by their management system. They create a system with a robust backup and a huge capability of laboratories, personnel and logistics which are necessary.



Graph 2: Percentage of public health risks related to food safety issues based on several countries

(Source: Created by Soumyadeep Chakrabarti)

The majority of developing nations lack sufficient regulations governing nutrition and food safety. Because of this, these nations have high rates of malnutrition and food-borne infections.

Millions of children are thought to die each year as a result of malnutrition, which is a serious public health issue in poor nations. Foodborne infections are a significant issue in developing nations as well, and they are frequently brought on by tainted food. Developing nations must establish stronger rules governing nutrition and food safety in order to safeguard the health of their citizens. In order to safeguard the population's health, developing nations must enact strict food safety and nutrition regulations. Malnutrition, food-borne infections, and obesity are just a few of the health issues that can result from poor food safety and nutrition. Since access to wholesome food is sometimes scarce in poor nations, these issues might be particularly serious there.

Developing nations can aid in ensuring that their citizens have access to safe and healthy foods by passing tougher food safety and nutrition policies. In order to safeguard the population's health, developing nations must enact strict food safety and nutrition regulations. Malnutrition, food-borne infections, and even mortality are just a few of the health issues that can result from poor food safety and nutrition. It is even more crucial to have rules in place to ensure that food is nutritious and safe in developing nations where resources are frequently scarce. To safeguard their inhabitants' health, developing nations must implement and enforce tighter food safety and nutrition regulations. Food-borne infections, malnutrition, and even death can result from poor food safety and nutrition, among other issues. Stricter regulations will aid in ensuring that food is nutritiously adequate and safe to consume. This will lessen the strain on the healthcare system and help to enhance the population's general health. Food safety and nutrition laws are frequently less strict in underdeveloped nations than they are in industrialized nations. People in these nations may experience severe health issues because of this. Food poisoning can result from contaminated food, and malnutrition and other health issues can result from a poor diet.

Importance of policies and programmes for nutrition

Micronutrients are the most essential things for the growth of people. Vitamin A, iron, folic acid, zinc, and iodine micronutrients are effective ways to improve the birth outcomes for mother and child. Vitamin A is a major micronutrient for newborn babies. The presence of such nutrients in food items increases the demand of customers which increases the economic growth of the country (Okumus et al. 2019). Several policies and programmes are taken for proper nutrition in the food processing system. The key factor of the programmes are

- To make such an atmosphere to promote peace. Remove poverty and gender discrimination.
- Create a market-oriented world in the trading system.
- Increase sustainable production of food and grow the investment system in human resources and also develop the rural areas.
- Implement such policies to increase physical and economical systems with the production of sustainable food.

There are more key factors to improve the programmes. There are some issues in many developing countries in the security of food and nutrition. There are several problems in institutional design in many developing countries. The security of food and nutrition issues are multi-sectoral issues which create hinder achieving cross-sectoral collaboration. A lack of human resources in many developing countries and the lack of nutritious food complicates the overall system, which causes several hazards (Hatab et al. 2019). These problems are reduced by the international nutrition system. The guidance of this nutrition system helps to reduce the problems which are related to the security of food and lack of nutrition in the food. The proper instruction is followed to reduce the problems as per the requirements.

Marketing channel	Percentage of produce growers
Direct to consumer	5
Processed	15
Fresh cut	31
Fresh	37
Mixed	49

Table 1: percentage of produce growers in the marketing channel

(Source: Created by Soumyadeep Chakrabarti)

Existing legal provisions

Prior to 2011, the following were the laws pertaining to regulation and control of food safety and nutrition in India :

- 1) Vegetable oil products control order of 1947
- 2) Prevention of food adulteration act of 1954
- 3) Fruit product order of 1955

- 4) Solvent extracted oil , de-oiled meal and edible flour control order of 1967
- 5) Meat food products order of 1992
- 6) Milk and milk products order of 1992
- 7) Edible oil packaging regulation order of 1998

All of these legislations were repealed in 2011 when the Food safety and standards act of 2006 (FSS Act) came into implementation and also the Packaging & Labeling regulations of 2011. The maximum fine of Rs. 2 lakhs could be imposed for not complying with the rules and regulations of the FSS Act. Additionally, every food product must have the following information :

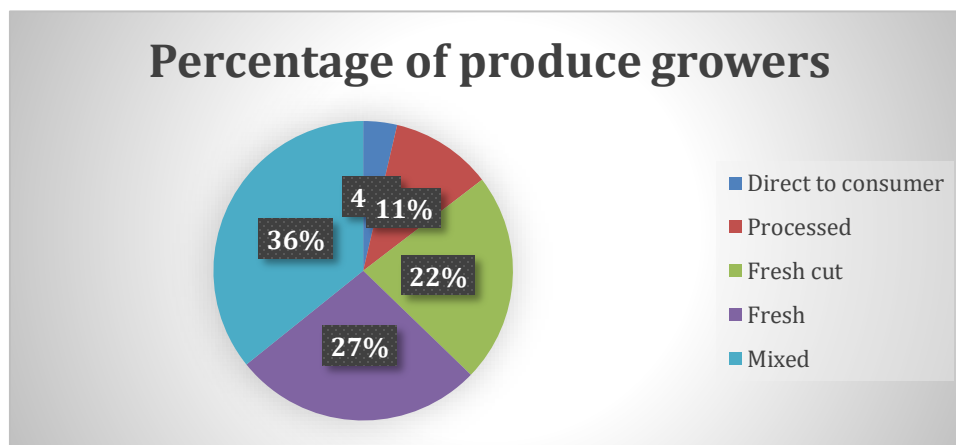
1. Food's name.
2. Table of ingredients.
3. Manufacturing & packing date.
4. Use by date & best before date.
5. Address & name of packager or manufacturer.
6. Nutritional information table.
7. Net quantity.
8. Code / Lot / Batch number & identification.
9. Red colour for non-vegetarian and green for vegetarian product.
10. Food additive information.
11. Imported food's country origin.
12. Instruction for using.

Methodology

In this mentioned research the secondary data collection process is used to collect the data. These data collection methods are helps to collect more data from various websites. More data which are collected from various source helps to know detailed information about the research which help to make the research process easy (Voss-Fels et al. 2019). This method is effective to get a huge amount of data about the research.

Data analysis and findings

The collected data need to be analysed properly. There are several types of data. In this research qualitative data are used. The data analysis process is important to get the accuracy of the collected data. Qualitative data as numerical data helps to get accurate information about the research. This statistical data helps to maintain the research. The main objects are identified through this data. The challenges and the solution to the problems are identified in the mentioned research through this statistical data. The findings of the research are getting through the analysis process of this data. This data analysis process helps to find the accuracy and the flaws of the data.



Graph 3: Percentage of produce growers

(Source: Created by Soumyadeep Chakrabarti)

To safeguard their inhabitants' health, emerging nations must have robust regulations governing nutrition and food safety. In emerging nations, there is an increasing need for strict rules governing nutrition and food safety. The current condition of affairs in many poor nations means that nutrition and food safety frequently do not get the attention they need. Serious health issues for the populace are frequently the result of this. Additionally, widespread food insecurity is frequently a result of the absence of rules governing food safety and nutrition. This is a significant issue that requires attention. In order to safeguard the population' health, developing nations must enact strict food safety and nutrition regulations. Diarrhea, malnutrition, and even mortality are just a few of the health issues that can result from poor food safety and nutrition. Additionally, legislation governing nutrition and food safety can aid in ensuring that food is of a high standard and secure for consumption. In order to safeguard the population' health, developing nations must enact strict food safety and nutrition regulations. Malnutrition, food-borne infections, and obesity are just a few of the health issues that can result from poor food safety and nutrition. Laws governing nutrition and food safety can also aid in ensuring the safety and high quality of food.

Conclusion and future scope

From the above research, it is concluded that the application of food safety legislation is essential to maintain the quality of the food and the delivery of food. Several challenges of the safety of food-oriented are reduced through the implementation of this food safety legislation. In

developing countries, the safety of food is important for the growth of the economic system of the developing country. Several elements are there to grow the food safety system.

The elements should be followed as per the requirement to improve the development of the food processing system in several industries. The challenges and gaps are reduced through the proper implementation of food safety legislation. The future scope of maintaining the safety of the food is huge. The proper implementation can make huge opportunities for several food industries. This research helps the readers and the future researcher to get detailed information about this research.

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