

Assessment of Global Rice Production and Export Opportunity for Economic Development in Ethiopia

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Abstract: *The study was conducted on the assessment of global rice production and its export opportunity for economic development. Ethiopia is a versatile country and gate way to many African countries. The country is well known for agriculture having overall climate conduciveness with improved 4 factors of production. Rice is the staple food. Around 3.5 Billion people are consuming the rice. It is dietary food for 17 Asian, 9 American and 8 African countries. In 2009, China produced 197 MTs; India 131MTs and Indonesia 64 MTs. 50% of US production was exported for income generation. Thus, Rice has not only consumption but also a good scope for domestic and international Market. With view of these, the study was conducted with an objective to assess the global rice production. The study assumed (Hypothesis) that the (H: 1) Rice export in Ethiopia will influence the economic development. The study employed secondary source for analyses and proved hypothesis, Rice production will positively correlated with economic development. The study conclude that rice has become a commodity of strategic significance across much of Ethiopia for domestic consumption as well as export market for economic development*

Keywords: Rice Production, Export Opportunity and Economic Development

1. Introduction

Food, cloth and shelter's are the basic need for the human beings. Rice is the staple food of over half the world's population. The current population estimated around 7 billion during 2013, (fact changes every second) (pop clock). Means, least 3.5 billion people are consuming the rice a staple food. It is the predominant dietary energy source for 17 countries in Asia and the Pacific, 9 countries in North and South America and 8 countries in African continent (FAO, 2004). Rice is vital for the nutrition of much of the population in Asia, Africa, Latin America and Caribbean's. Rice is central to the food security of over half the world population. Rice provides 20% of the world's dietary energy supply, while wheat supplies 19% and maize 5%. Rice is a popular cereal crop commonly used as human food.

Ethiopia is well known for agriculture having overall climate conduciveness like Land Labor and Organizing Skills to adopt rice as a food/commercial crop. Rice cultivation is well-suited to countries and regions with low labor costs and high rainfall, as it is labor-intensive to cultivate and requires ample water. Rice can be grown practically anywhere, even on a steep hill or mountain's areas. It is mainly cultivated by small farmers in holdings of less than 1 hectare. Rice is also a wage commodity for workers in the cash crop or non-agricultural sectors. Ethiopia has an ample opportunity to produce the rice and distribute to national and international market.

Ethiopia is one of the fastest growing economies in the world. It was registered over 10% economic growth from 2004 through 2009 (IMF). It was the fastest-growing non-oil-dependent African economy in the years 2007 and 2008 (Addis Fortune). Ethiopian's well known the taste of rice from long back. The consumption is also readily stood at third place after Teff and Wheat in the country. Rice has become a commodity of strategic significance

across much of Ethiopia for domestic consumption as well as export market for economic development.

1.1 Problem Statement

The problem stated in study reveals that whether Ethiopia has an opportunity to export rice for economic development

1.2 Objectives

The study was carried out with an objective to assess the global rice production and export opportunity for economic development stood at second.

1.3 Hypothesis (H: 1)

The study assumed (Hypothesis) that the (H: 1) Rice export in Ethiopia will influence the economic development.

1.4 Methodology

The study employed secondary source for analyses and proved hypothesis, Rice production will positively correlated with economic development.

1.5 Tools

The collected data analyzed with the help of statistical techniques like ratios, percentage, and correlation.

2. Data Interpretation- Global Production of Rice

Rice is the seed of the monocot plants. It is the most widely consumed staple food for a large part of the world's human population, especially in Asia and the West Indies. Rice is grown in more than a hundred countries, with a total harvested area in 2009 of approximately 158

million hectares, producing more than 700 million tons annually (470 million tons of milled rice). About 90% of the rice in the world is grown in Asia (nearly 640 million tons). Sub-Saharan Africa produces about 19 million tons and Latin America some 25 million tons. In Asia and sub-Saharan Africa, almost all rice is grown on small farms of 0.5–3 hectares.

The World production of rice has risen steadily from about 200 million tons of paddy rice in 1960 to over 678 million tons in 2009. The increasing global population especially in Asian countries like China India and Pakistan are the major consumers of rice. In 2010; the three largest exporters of rice, in decreasing order of quantity exported were Thailand, Vietnam and India. Together, they accounted for nearly 70% of the world rice exports.

The three largest producers of rice in 2009 were China 197 million tons, India 131 Million tons and Indonesia 64 Million tons. The developing countries account for 95% of the total production with China and India alone responsible for nearly half of the world output. Figure 1 shows the top 10 rice production county in the world.

Among the six largest rice producers, the most productive farms for rice. China produced 6.59 tons per hectare. At 44 million hectares, India had the largest farm area under rice production in 2009. The rice farm productivity in India were about 45% of the rice farm productivity in China, and about 60% of the rice farm productivity in Indonesia. If India could adopt the farming knowledge and technology in use in China and Indonesia, India could produce an additional 100 million tons of rice, enough staple food for about 400 million people every year, and US\$50 billion in additional annual income to its rice farmers and in the 1990s, genetic studies took place in many European laboratories to increase rice production per hectare.

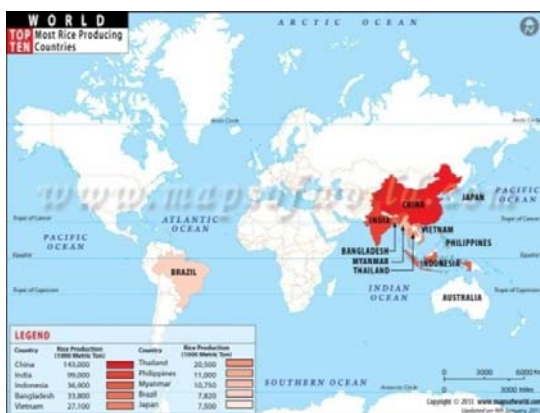


Figure 1: Top Ten Rice production in World

3. Rice Production in America

The U.S. rice industry produces roughly 20 billion pounds of rice on approximately 3.5 million acres each year, roughly 50 percent of which supplies the domestic market. Although the United States produces less than 2 percent of the world’s rice, it ranks among the top five rice-exporting

nations. United States has the top 10 market around the world, during the 2011, Mexico 863.7 million tons, Haiti 310 million tons, Japan 305.1 million tons, Canada 227.6 million tons, Turkey 200.7 million tons, Libya 168.9 million tons, Venezuela 147.3 million tons, Honduras 135.7 million tons, Nicaragua 119.9 million tons and Saudi Arabia 117.5 million tons. US rice industry study shows that over a 20-year period, rice farmers nationwide have achieved a 21% decrease in land use, 32% reduction in water use, 34% decrease in soil loss, 52% reduction in energy use and 29% reduction in soil and Methane production (USA Rice Federation).

4. Rice Production in Asian counties

Rice is the most important crop in Asia. In Cambodia, for example, 90% of the total agricultural area is used for rice production. As of 2009 world food consumption of rice was 531,639 thousand metric tons of paddy equivalent (354,603 of milled equivalent), while the far largest consumers were China consuming 156,312 thousands metric tons of paddy equivalent (29.4% of the world consumption) and India consuming 123,508 thousands metric tons of paddy equivalent (23.3% of the world consumption). Between 1961 and 2002, per capita consumption of rice increased by 40%.U.S. rice consumption has risen sharply over the past 25 years, fueled in part by commercial applications such as beer production. Almost one in five adult Americans now report eating at least half a serving of white or brown rice per day.

Although China and India are the two largest producers of rice in the world, both countries consume the majority of the rice produced domestically, leaving little to be traded internationally. Rice is a major food staple and a mainstay for food security. The Major importers usually include Nigeria, Indonesia, Bangladesh, Saudi Arabia, Iran, Iraq, Malaysia, Philippines, Brazil, some African and Persian Gulf countries.

The average world yield for rice was 4.3 tons per hectare, in 2010. Australian rice farms were the most productive in 2010, with a nationwide average of 10.8 tons per hectare. Developing countries are the main players in the world rice trade, accounting for 83% of exports and 85% of imports. While there are numerous importers of rice, the exporters of rice are limited. Just five countries like Thailand, Vietnam, China, the United States and India.

Worldwide, about 80 million hectare of irrigated lowland rice provides 75% of the world’s rice production. These systems remain the most important rice production systems for food security, particularly in Asian countries. Rice has grown under irrigated conditions produces 75% of the world's rice. Rice production, milling and marketing in the United States is a multibillion dollar industry, generating \$34 billion in economic activity annually and providing thousands of jobs that are critical to the economic health of rural communities.

5. Rice Production in Africa

Rice has become a commodity of strategic significance across much of Africa. Driven by changing food preferences in the urban and rural areas and compounded by high population growth rates and rapid urbanization, rice consumption in sub-Saharan Africa has increased by 5.6% per annum between 1961 and 1992, more than double threat of population growth, with consumption and production spreading well beyond their traditional centers in West Africa and Madagascar. West Africa has become a significant player in world rice markets precisely because of its increasingly significant share of world rice imports, which stands now at 8.4% which stands.

In Africa, rice is the fastest growing food staple. The gap between demand and supply in sub-Saharan Africa, where rice is grown and eaten in 38 countries, reached 10 million tons of milled rice in 2008, costing the region an estimated \$3.6 billion for imports. Rice is also one of the most important and fastest growing staple foods in Latin America, especially among urban consumers and particularly the poor. Like Africa, the region is a net importer of rice, with a projected annual deficit of 4 million tons by 2015.

The major staple food in West-Africa. Rice consumption in West Africa has been steadily growing at an annual rate of 6% since 1973, with most of this growth being caused by substitution for traditional coarse grains, roots and tubers. Consequently, its share in cereal consumption has reached 26% from 15% in 1973. Rice is now providing more than third of cereal calorie intake in West Africa in general, and up to 85% in traditional rice producing countries like Gambia, Guinea-Bissau, Guinea, Sierra Leone, Liberia and Côte d'Ivoire.

African people consume more rice than what is produced on the continent. During 2001 – 2003, milled rice production in Africa averaged 11.80 million tons (17.59 million tons paddy equivalent) per annum whereas consumption averaged 15.27 tons (22.90 paddy equivalent) per annum. Africa imported on average, 5.24 million tons per annum, valued at US\$1.13 billion to meet the deficit in consumption. Rice imports have grown significantly at an average annual rate of 6.3% per annum from 4.15 million tons in 2000 to 6.12 million tons in 2007. The share of imported rice relative to total rice consumption now stands at about 34%. Many African countries have made significant strides to increase rice production and reduce imports. These efforts have however not succeeded and the import bill continues to increase, draining the continent's meager financial resources that would otherwise be invested in other productive sectors.

Africa is a minor player as far as rice production is concerned. The region with the largest production of paddy rice in the world is Asia with 584 million tons in 2006. This represents over 90% of total world production. Africa produced approximately 21.9 million tons of paddy rice in 2006. This represents 2.5% and 2.7% of world and Asian production respectively. Paddy rice production grew at 4.3% per annum from 10.1 million tons in 1986. Annual growth averaged 4.8% between 1986

and 1996 but declined to 3.7% per annum between 1996 and 2006. Africa harvested 9.2 million hectares of rice in 2006. This represents 6.0% of the total area harvested in the world and 6.6% of the area harvested in Asia. The total area harvested increased by 3.0% per annum from 5.1 million hectares in 1986 to 9.2 million hectares in 2006. Between 1996 and 2006 growth slowed down to 2.4% per annum.

6. Emergence of Rice Production in Ethiopia

Ethiopia is a versatile country and gate way to is the only region in the world with the lowest yields in rice. Estimated yields for 2006 are 2.32 tons per hectare compared to 5.80 tons in Europe, 4.93 in the Americas and 4.22 in Asia. Average rice yields in Africa account for only 57% of the yields obtained in Asia. Yields have increased over the past two decades however the increase has been too small to make any significant difference. Most of the increase in production has come from expansion in the area harvested rather than from increases in yields .many externalities.

Ethiopia can find export market for other African countries. Several factor affecting around the globe and rice production is most suitable in Ethiopia due to securing the global food crises, reduce the stress on climate change, difficulties to manage the limited land resources in all other continents, ample scope for agriculture and allied industrial sector, employment opportunity, scope for domestic consumption and export market, sustainable growth and economic development, green economy, millennium development goals, diversification in business, to avail of their technological advantage moreover opportunity to invest in agriculture sector will be the mutual benefit for investors and host country. Thus, the rice crop is one of the main trust areas of attracting for domestic consumption or international trade purpose in Ethiopia. The country already had all the requirements for a head-start in the rice production at large scale for a remarkable economic transformation. This will be great opportunity for Ethiopia soon.

7. Hypothesis Testing (H: 1): Correlation Method

The world's largest exporters of rice in 2012 were India (9.75 million tons), Vietnam (7 million tons), Thailand (6.5 million tons), Pakistan (3.75 million tons) and the United States (3.5 million tons). Thus, time to adopt the rice as a food or commercial crop in Ethiopia. Rice has wide market around the Globe (USDA report). Based on, the study assumed (Hypothesis) that the (H: 1) Rice export in Ethiopia will influence the economic development. The test resulted positively. The result Rice production has an great opportunity for export, lead income generation for Economic development. For Instance, in US \$50 billion in additional annual income to its rice farmers and in the 1990s

8. The Major Findings

The consumption of rice during 2009 shows 156.3 MMT's consumed by China stood at first, 123.5 MMT's consumed by Indians, Indonesian consumed 45.3 MMT's, in Vietnam 18.4 MMT's consumed, Bangladesh 38.2 MMT's, Philippians 17MMT's. The Total consumption during 2009 was 531.6 MMT's. This shows there is an ample scope for production as well as export opportunity in Ethiopia.

9. Conclusion

Rice has become a commodity of strategic significance across much of Ethiopia for domestic consumption as well as export market for economic development.

References

- [1] US Census Bureau, Department of Commerce
- [2] <http://www.census.gov/popclock/>
- [3] <https://en.wikipedia.org/wiki/Rice>
- [4] Rice is Life,. International Year of Rice- 2004, Food & Agricultural Organization of the United Nations, Rome
- [5] FAO (FAOSTAT). "Food Balance Sheets, Commodity Balances, Crops Primary Equivalent". Retrieved August 17, 2012(WIKI)
- [6] <http://www.imf.org/external/index.htm>
- [7] Tamarat Gorgis (2007), IMF positive on County's
- [8] Growth outlook, Addis Fortune, 18 june,2007.
- [9] <http://allafrica.com/stories/200706181790.html>
- [10] The U-S Rice Industry at a Glance, USA Rice Federation Arlington, VA (www.usarice.com)
- [11] www.mapsofworld.com(Figure 1)

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