

Challenges of Garri Processing Industry in Ugboju Community in Otukpo Local Government Area

Joy Akondufiye Owoicho

Department of History,
Benue State University, Makurdi
Tel: 08073749337
Email: akondufiye@gmail.com

ABSTRACT

This study was undertaken to discuss the Challenges of Garri Processing Industry in Ugboju in Otukpo Local Government Area. The study employed the used of both primary and secondary sources. Primary data were collected from oral interviews from the garri processors in the study area while secondary data which were collected from published and unpublished books, articles, journals and interviewer material. The objectives of the study are to discuss the challenges of garri processing and suggest possible solution to the challenges of garri processing in the study area. Oral source has it that garri processing industry started as far back as 1970s in Ugboju community. Garri processing industry has reduced unemployment, increase income and brought about food security in Ugboju community. Despite these enormous economic development, garri processing industry in Ugboju, is still faced with numerous challenges. This

includes poor infrastructure, lack of modern processing technology, inadequate funding such as low productivity, inadequate storage facilities, marketing and distribution and quality control. Addressing these challenges will require the collaboration of stakeholders, including the government, private sector and development partners to provide the necessary investment in infrastructure, modern processing technology, and research and development. Additionally, there is a need for effective policies that support the industry's growth, such as incentives for producers and buyers of these products and also to provide support for both the small and medium scale enterprises.

Keywords: Development, entrepreneurship, enterprise, rural poverty and poverty alleviation.

Introduction

The food problems in Nigeria and other developing countries can be reduced or even eliminated by intensifying agricultural production.¹ This emphasis on agricultural research for many years has been mainly based on increased food production. One of the crops where considerable increased production level has been noticed is cassava.² Cassava is a major crop for food security in Nigeria and its principal processed form is garri.³

Cassava is of the principal useful tropical plants and is found in other countries of the world. There are different opinions about the centre of this species. However, the majority of botanists and ecologists consider the Northeast of Brazil to the most probable centre of origin. The greatest diversity of the *genus Manihot* is found in Brazil, Southwestern Mexico, and Guatemala.⁴ Evidence available indicates that the area of

domestication of cassava comprises an extensive geographical region from southern Brazil to Mexico; Cassava has been cultivated in that zone for approximately 5000 years. Archaeological studies indicate that cassava was 4000 years ago in Peru by ancient Pre-Incan civilizations.⁵

The distribution of cassava to other continents began after the discovery of South America. The Portuguese took it from Brazil to the Western Coast of Africa in the 15th Century; later, at the end of the 18th century, they introduced it to Madagascar and then onto the East coast of Africa. The fact that cassava was introduced into Africa through both coasts explains the wide diversity of these species in that continent.⁶ Cassava was introduced to the southeastern Asia by Spanish merchants at the beginning of the 17th century. Finally, about 1800, cassava passed from Africa to India, where it is widely distributed and is important in nutrition. Currently, cassava is a crop of great importance in all tropical regions of world, not only for the consumption of fresh roots as a subsistence crop but also for its agro industrial uses.⁷

Cassava is uniquely important as a reserve against famine⁸ it has gained advantage over yam to some extent due to its ease of cultivation, high resistance to drought, ability to grow in exhausted soils and its adaptation to wide range of ecologies.⁹ According to Enete,¹⁰ cassava may in fact hold the key to land use intensification in Africa. Another of its comparative advantage over other crops is its efficient production of cheap food energy, its availability all year round as well as its high degree of tolerance to extreme conditions. According to Nweke, Dixion, Asiedu and Folayan¹¹ these qualities contribute enormously to alleviating food crises in Africa.¹²

Processing cassava is important for two reasons: firstly, the crop deteriorates rapidly after harvest and therefore needs to be preserved for future consumption¹³ and secondly, cassava may contain cyanogenic compounds, which makes the chronic consumption of inadequately processed cassava products a serious risk to human health.¹⁴ One of the major and most important products of cassava is Garri. Garri is a widely consumed Nigerian food; an estimated 60 million tons were produced in 2019.¹⁵ It is consumed principally as a main meal either (eba/akpo) or taken as a snack when soaked in cold water, sweetened with sugar and consumed with roasted groundnut, coconut and sometimes dry fish. Garri features more frequently up to 2 or 3 times in the daily diet of most households in the producing areas.¹⁶

The volume of garri produced to feed the Nigerian population is substantial, nonetheless most of the production relies on traditional know-how.¹⁷ Processing is conducted at a small scale using semi-mechanized, rudimentary techniques of processing, and in particular little is known about the variability in the process and its impact on finished productivity (e.g. the ratio of Garri to fresh roots). Garri processing involves several operations: peeling, grating, fermenting, pressing, sifting, and roasting of the root.¹⁸ As a cash crop, cassava generates cash income for the largest number of households in companion with other staples.¹⁹ Thus, many Nigerians derive much of their food and employment from cassava production, processing, marketing and cassava based agro-industrial schemes. Although, yam is traditionally the most important food among the indigenous ethnic groups in Benue State, but cassava has gained widespread acceptance as a “Saviour” crop being cropped by almost all households State-wide.²⁰

Therefore, given this background, the study focuses on the Challenges of Garri Processing Industry in Ugboju Community in Otukpo L.G.A of Benue State. Beginning with how these Industries have improved the lot of people in the area. The central argument of the study is that Garri Processing Industry is critical for the economic growth and development in Ugboju area. Indeed, Garri Processing Industry is a major source of livelihood in the entire Ugboju community. In spite these, Garri Processing Industry in Ugboju communities of Otukpo Local Government Area is faced with lot of challenges.

The study is divided into three sections. Section one, examines the emergence of garri processing in Ugboju community. Section two, discusses the challenges of garri processing industry in Ugboju community. And section three, addresses the challenges of garri processing industry in Ugboju community in Otukpo L.G.A.

Emergence of Garri processing in Ugboju

Cassava was introduced into Central Africa from South America in the 16th century by the early Portuguese exporters²¹. It was probably the slaves who introduced the cassava crop into southern Nigeria as they returned to the country from South America through the Island of Sao Tome and Fernanda Po. At that time, there were Portuguese colonies off Nigeria shores. Cassava however, did not become important in the country until the end of the nineteenth century when processing techniques were introduced as many slaves returned home.²²

In Nigeria, cassava is grown in all the ecological zones; the crop is planted all year round depending on the availability of moisture. The peak of planting period is April to May. Mixed cropping system is the most

practiced method of cassava production. Cassava is important not as a food crop but even more so as a major source of income for rural households. Many Nigerians derive much of their food and employment from cassava production, processing, marketing and cassava based agro-industrial schemes.²³

Although, yam is traditionally the most important food among the indigenous ethnic groups in Benue State, cassava has gained widespread acceptance as a “Saviour” crop being cropped by almost all households State-wide.²⁴

Oral source has it that garri processing industry in Ugboju community began in the 1970s²⁵ Before the advent of garri processing industry in Ugboju, cassava was use for making starch, and cassava flour. Furthermore, the Ugboju-Otahe ward precisely the Okoto people said they hear about garri processing from the Edumoga, the Utonkon and the Igala. The actually began garri processing when the intermarried the Igala. The name “garri” originated from the Hausa's. Any grain grinded into flour is called garri. For instance, guinea corn flour is called *garin dawa*, maize flour is called *garin masara* and finally rice flour is called *garin shinkafa*.²⁶

Cassava tubers are harvested from the seventh month after planting up to second year, depending on the size of the farm land. It is then processed into a wide variety of granules and pastes that are consumed by the people and also allow for storage. After harvesting, cassava is then processed into garri. In other to do this, the cassava tubers are peeled with knives, cut into sizes, washed, and grated manually by women and children using a grater locally made from perforated pan. The grater is placed over a basin to allow the grated paste to drop into the basin to avoid sand from contaminating it.

This popular method remains dangerous and fatal; many women have lost their fingers and many more have been maimed after being cut by the sharp edges of the grater. This manual grating is gradually being replaced by motorized grating machines.²⁷

After grating, cassava paste is put into a rag (cloth) because of the absent of sack bags and tied securely.²⁸ Sticks are placed on the bag in horizontal and vertical forms to allow the fluid in it to drain. Apart from the sticks, metal. Through, the dangerous prussic acid contained in the cassava is removed. The cassava bag is left for about four days to properly drain, after which it is ready for shifting and frying. The shifting is done on a locally made shift, woven from bamboo, called *kpassa*. This device separates the chaff from the fine granule which is then fried into garri. It could be fried white without any additives or palm oil could be added to give it a yellow colour called yellow garri.²⁹

Frying, the final step of cassava processing into garri involves heating the locally made frying pan, called *agbada* or *akanjo* (earthen pot) over a mold.³⁰ There is an opening in the mold where pieces of firewood are stacked. The woman doing the frying sits on a small stool across the fire place. It is made in a certain way to prevent excess heat from grazing the women and anyone else who does the frying. The granule is then poured into the heated *agbada* and stirred from time to time with *oba* until the desired level of dryness is achieved. It is then scooped out, aired and bagged: now ready for consumption by the family and or for sale at the market. Garri could be stored for up to three months without becoming stale or losing quality.³¹

Garri can be consumed as eba which results from adding some garri to boiled water. Eba is rolled into bowl dipped into any of the different kinds of soup and

swallowed. Garri can also be consumed as cereal, in which case, it is poured into a bowl, mixed with water and then scooped with a spoon into the mouth. This could be eaten alone or with dry fish, palm kernel, coconut and groundnut.³²

Challenges of Garri Processing Industries in Ugboju Community in Otukpo L.G.A.

Garri processing industry is the major economic activities in Ugboju community in Otukpo Local Government Area. The four most important reasons farmers give as motivation for the production of cassava and other tuber crops in the State include food security, extra income, tradition and industrial raw materials.³³ As a food crop, cassava fits well with farming patterns of the small holder farmers in Nigeria, because it gives some yield of carbohydrates and is available all year round thus producing household food security. Compared to grains; cassava is more tolerant to low soil fertility and more resistant to drought, pests and diseases. Furthermore, its root store well in the ground for months after they mature, these attributes combined with other socio-economic considerations are therefore what International Fund for Agricultural Development (IFAD) has recognized in the crop lending itself to a community based approach to poverty alleviation.³⁴

One of the economic impact of Garri Processing Industry in Ugboju community is employment opportunities. This industry has the potential to provide employment for a significant portion of the population, including women and youth.³⁵ The garri processing industry in Ogbia: MICHAELSON SUPER BLOCK GARRI PROCESSING INDUSTRY is the biggest and it

employs and pays people according to the task carried out in processing garri. This ranges from payment made for the supply of cassava tubers, peeling, washing, grating, sieving, frying and packaging. Also, garri processing is an important source of income for farmers, traders, and processors in Ugboju community. The sale of garri provides a significant portion of the income of many households in the area. Parents pay their children's school fees from it and also the youth use the income to train themselves in tertiary institution.³⁶ The garri processing industry in Ugboju-Icho ward precisely in Okakle market days; up to 5-6 full trailer of garri is sold on every five days. There are buyers from Abuja, Port Harcourt and Jos.³⁷ While the garri processing industry in Ugboju-Ehaje in Ogbia the MICHAELSON SUPER BLOCK GARRI PROCESSING INDUSTRY have buyers from Gombe, Sokoto and Kano.³⁸ Furthermore, garri is a staple food in Nigeria, and the processing of garri in Ugboju community contributes to food security in the country. It is thus a widely held belief that "there is no famine where cassava is grown" cassava is simply a "food security" crop.³⁹ The availability of garri provides a cheap and accessible source of food for the population, particularly during times of food scarcity.

Despite the enormous economic impact of garri processing in Ugboju community in Otukpo. Garri processors encountered many set-backs which are stated below.

One of the challenges is poor infrastructure. Garri processing is a critical economic activity in Ugboju community where it is a staple food. However, poor infrastructure has posed several challenges to garri processing in Ugboju community. Here are some of the challenges:

1. Limited access to clean water: Garri processing requires a lot of water to wash peeled cassava tubers. Poor infrastructure, such as lack of piped water or unreliable water supply, has limit access to clean water. This can result in the use of contaminated water, leading to health risks for consumers.
2. Inadequate transportation: Poor road networks have hinder the transportation of cassava tubers from farms to processing sites. This has resulted in delays and spoilage of the tubers, leading to a decrease in productivity and increased cost.
3. Lack of modern processing equipment: Garri processing involves several steps, including peeling, grating, frying and drying the cassava. The use of traditional equipment and methods can be time-consuming and result in a lower-quality product. Garri processing industry in Ugboju still makes use of traditional equipment and methods for processing. This has limited productivity and the quality and quantity of garri.
4. Limited access to markets: Poor infrastructures, such as bad roads and inadequate storage facilities, have made it difficult to transport and store the garri in Ugboju community. These have led to a decrease in sales and a loss of income for garri processors.⁴⁰

Another challenge to garri processing is lack of modern processing technology. Most garri processing industry in Ugboju community still uses manual methods, which are inefficient and result in low-quality garri. For example, grafting and milling machines are owned by very few people. This results to long queues thereby causing delay in processing. The lack of modern processing technology hinders the industry's ability to compete globally. The lack of modern processing

technology has posed several challenges in the garri processing industry in Ugboju community, including:

1. Low processing efficiency: Manual garri processing methods are labor-intensive and time-consuming. Without modern processing technology, such as mechanized graters, hydraulic presses, or dryers, the processing time can be longer, and the processing capacity can be lower. This has resulted in low productivity and increased costs.

2. Inconsistent product quality: The quality of garri produced through manual processing methods varies due to inconsistent processing conditions. Factors such as the duration of fermentation, moisture content, and frying temperature can affect the texture, flavor, and shelf life of the final product. Modern processing technology can help control these factors and ensure consistent product quality.

3. Health and safety risks: Manual garri processing methods have posed health and safety risks to workers. The use of open fire for frying, for instance, cause respiratory problems due to the inhalation of smoke and ash. Also, the use of manual graters has lead to hand injuries, and the fermentation process attract flies and other insects, increasing the risk of contamination. Modern processing technology can help mitigate these risks.

4. Environmental impact: Manual garri processing methods have a negative environmental impact due to the use of firewood for fuel and the generation of waste water. Modern processing technology, such as solar dryers and water recycling systems, can help reduce the environmental impact of garri processing.⁴¹

Also, there is also a challenge of inadequate funding. The garri processing industry in Ugboju community lacks adequate funding, which makes it

difficult for manufacturers to invest in modern processing technology, research and development, and marketing. Garri processing, like any other business, requires sufficient funding to operate successfully. Inadequate funding can pose several challenges for garri processors in Ugboju community, including:

1. Limited Production Capacity: Adequate funding is required to purchase raw materials, machinery, and equipment needed for garri processing. Insufficient funds have limited the production capacity of the garri processor, leading to a lower output of garri and, ultimately, reduced revenue.
2. Quality Control Issues: Garri processing requires attention to detail and strict adherence to quality control measures to ensure the final product is of high quality.
3. Marketing and Sales: Garri processing is a competitive industry, and it has been challenging for garri processors with inadequate funding to market and sell their products effectively. The lack of funding for marketing and sales has limited the reach of the garri processor and make it difficult to attract new customers.
4. Limited Expansion: Inadequate funding has also limited the garri processor's ability to expand the business. Without sufficient funds, it challenging to open new processing plants or expand the existing ones to meet the growing demand for garri.
5. Financial Instability: Garri processing is a capital-intensive business, and inadequate funding has led to financial instability. Without enough money to cover operating expenses, pay staff, and purchase raw materials, the garri processor struggles to stay afloat.⁴²

Furthermore, inadequate storage facilities is a major challenges of garri processing industry in Ugboju. Garri processing involves several stages, from harvesting cassava to grating, pressing, fermenting, and frying.

Adequate storage facilities are crucial to ensure the quality, safety, and marketability of the final product. Inadequate storage facilities have posed several challenges to the garri processing industry in Ugboju community including:

1. **Spoilage:** Garri is prone to spoilage due to its high moisture content and susceptibility to microbial growth. Inadequate storage facilities have led to moisture buildup and increased microbial activity, which have spoiled the garri, rendering it unfit for consumption.
2. **Pests and rodents:** Storage facilities that are not properly sealed or protected can attract pests and rodents, which can contaminate the garri with their droppings, urine, and fur. This can lead to health hazards and reduce the quality and market value of the product.
3. **Loss of nutritional value:** Garri is a source of essential nutrients such as carbohydrates, proteins, and vitamins. However, inadequate storage facilities have led to the loss of these nutrients due to exposure to light, heat, and air. This has reduced the nutritional value of the garri and makes it less appealing to consumers.
4. **Reduced shelf life:** Garri has a relatively long shelf life, but inadequate storage facilities can reduce this shelf life significantly. This has led to losses for the producer and reduced availability for consumers.
5. **Increased production costs:** Inadequate storage facilities has increased the production costs of garri processing by requiring frequent reprocessing, additional labor, and increased use of preservatives and other additives.⁴³

Lastly, marketing and distribution of garri is another challenge. The marketing and distribution of

garri are poorly organized, and manufacturers lack access to markets beyond their immediate vicinity. This makes it difficult for them to sell their products and generate revenue. For example, in Okwudu in Ugboju-Otahe ward; marketing of garri is a challenge. The market day of Okwudu is the same as Oyangele's market day since oyangele was the first place garri processing started around that axis. It has higher patronage than Okwudu in Ugboju-Otahe.⁴⁴

Addressing the Challenge of Garri Processing Industry in Ugboju Community

Addressing these challenges will require the collaboration of stakeholders, including the government, private sector and development partners to provide the necessary investment in infrastructure, modern processing technology, and research and development. Additionally, there is a need for effective policies that support the industry's growth, such as incentives for producers and buyers of these products and also to provide support for both the small and medium scale enterprises.

Furthermore, garri processing industry in Ugboju should focus on improving the efficiency of their operations, building strong supply chain networks, investing in branding and marketing efforts, and partnering with government agencies to ensure compliance with regulations. Poor infrastructure can significantly impact the productivity, quality, and profitability of garri processing. It is essential for governments and private sector players to invest in infrastructure to support the growth and development of the industry. The adoption of modern processing technology can help overcome these challenges and improve the productivity, quality, and sustainability of garri processing in Ugboju community.

Lastly, it is essential for garri processors to have adequate funding to operate efficiently and compete effectively in the market. Garri processors in Ugboju should invest in adequate storage facilities such as silos, air-tight containers, and pest-proof structures. Proper storage conditions such as low humidity, cool temperature, and protection from pests and rodents should also be maintained to ensure the quality, safety, and marketability of the final product.

Conclusion

It can be concluded that garri processing and marketing have reduced poverty and have the potential for achieving the objective of poverty reduction in Ugboju in Otukpo Local Government Area. This is because the study found overwhelming evidence that garri processing and its marketing have generated income for people in the study area. The study also found overwhelming evidence that the garri processing technologies adopted in Ugboju were predominantly traditional and manual but were also highly profitable. It can be concluded further that for the purpose of achieving poverty reduction to be fully realized, the challenges identified by the study should be addressed. To this end, the study recommends the provision of improved technologies for processing and infrastructural support for the rural areas, and microfinance institutions that could be a source of credit to small-scale rural cassava processing units.

It also recommends the development of rural infrastructure such as access roads to enhance accessibility of processors to market centres for sale of their products; the digging of bore holes for the supply of water needed for the garri processing and the improvement of good storage facilities to avoid spoilage and decline in quality. The provision of modern

processing technologies in key garri processing industry in Ugboju community to help convert large quantity of tubers to processed products; and the employment of extension agents to train processors on the use and adoption of modern technologies through farmer extension services.

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