

## **Do we have Governance in Rural Commodity Value Chains? Evidences from Niger State, Nigeria**

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### **Abstract**

*This study deployed the Value Chain Approach (VCA) to study governance in rural commodity value chains while focusing on yam value added products within Niger State, Nigeria. The question of whether actors within the yam industry respects the food safety standards endorsed by the standardization bodies of the government or not is the major crux in this study. The study deployed qualitative case study methodology and the procedures utilized for data gathering were nine structured interviews, review of past literature and observation using the overt technique. The findings of the study revealed that governance and food safety measures are well spelt out by the certification bodies but what isn't clear enough is the implementation of food safety measures and governance within the rural settings where many unregistered actors participate in value chains. The findings suggest that disintegration in value chain governance may limit the market exploitability of yam value added products, specifically yam flour, which is mostly traded in the rural markets and this could further make international competitiveness less possible.*

**Keywords:** Value, Chain, Yam, Rural Markets

**JEL Classification:** A13, O18, M2, Q1, M13.

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### **1. Introduction**

Excerpting from the available literature on the commercialization of indigenous value-added agricultural products, Nigeria accounts for over 65% of global yam production, with the bulk of products emanating from the North-Central Zone of Nigeria (Ajibade et al., 2018; Adejo, 2017). Nigeria is rated the largest producer of yam in West Africa and in 2018 the export of yam was pegged and valued at a total of 72,580.851 thousand tonnes (Ajibade et al., 2018; Basse, 2017; Wood, 2020). Yam production and its export have provided income for households and revenue for government to the tune of over 500million annually (Adejo, 2017). The data provided is principally for yam tuber trade and not explicitly for value added yam products such as yam flour. Research revealed that more than half of the yam flour produced and consumed in Nigeria emanate from four states Kwara, Niger, Nassarawa and by extension Benue (Bekun, 2017; Akanmu et al., 2018; Agba et al., 2019; Iorzua et al., 2020).

In the Nigerian context, sustained entry into organized market with value added yam products ought to be affected by Nigerian government's food safety and certification regulations. The guidelines requires that yam should be in its whole form, fresh, firm in texture, free of sprout, free of rot, free from mechanical and physiological damage, external moisture and odour. In this paper we align our certification standards to the guidelines provided by National Agency for Food and Drug Administration and Control (NAFDAC) to analyze the impact of standards on the domestic trade of rural commodities such as yam within the organized market settings. The crux of the study is that, certification standards may relegate rural actors' participation in value chain to the traditional rural markets where food safety is not necessarily considered by consumers of locally processed food products.

The comparative significance of agricultural products standards otherwise referred to as food safety standards have been discovered to mitigate effective performance in value chains. For instance, in Nigeria, it has become a reason for competitiveness especially with the implementation policies such as border closure (Abegunde & Fabiyi, 2020). The World Trade Organization developed an agreement in relation to sanitary, phytosanitary and technical wedges to trade and these have been the strategical instruments countries have been using as guidelines to check issues related to food safety standards for commodities traded across international markets. These standards give governing authorities opportunity to fly stringent standards that would cut across nations without pulling down specific international trade rules. For example, the total rejection of polycyclic aromatic hydrocarbon in shea butter is one very important standard concern by buyers of the product in USA, Europe and China (Nahm, 2011; Shitu & Mohd-Nor, 2017). Similarly, in the Yam Industry, microbial rots found in the exported yam from Nigeria to the USA was rejected over poor quality (Onyeka, 2020).

Consequently, the growing inflexibility of developed countries food safety standards with better-quality of food using investigative dimensions pooled with swiftly progressing national certification bodies such as NAFDAC has placed quality on business sprightliness, technological complexity and quality regulation arrangements has made it almost impossible for actors within the rural settings to meet with international standards. Apart from investigating standardization in yam production and trade in Nigeria, emphasis will also be given to yam flour production and the inability of these products to compete effectively at the international market despite the plumb integration of small-scale producers within the rural settings. In this paper we narrow down our focus to yam flour which is the largest value-added commodity derived from yam tuber. In a nutshell, it accounts for 85% of the total value derived from the yam industry after direct consumption. Past research on rural food supply chains revealed how supply chains in this context are determined by varying demands from consumers (Kolawole et al., 2020). It is often controlled by actors within the value chains of various commodities and mostly those in the retail business or by direct consumers of food products. Though, in the sub-Saharan part of the world many researches have revealed how multiple stakeholders also participate in rural food supply chains

those stakeholders include exporters, middlemen, standard organizations, government and non-governmental organizations (Naik & Suresh, 2018). This confirms that foods produced in the rural settings are not only consumed locally but can also go into the international markets through export.

Even though, there is a dearth in the number of studies related to yam flour supply chain. A great number of researches in the yam industry have focused more on the economics of yam cultivation (Kolawole et al., 2020; Bekun, 2017; Akanmu et al., 2018; Agba et al., 2019; Iorzua et al., 2020). Studies emanating from Regina and Kikuno (2011) and Migap and Audu (2012) extended their research beyond cultivation to the economic impact which gave an insight to the analysis of value chain and supply chain.

## **2. Literature Review**

### *Conceptualization of Stakeholders Relationships using Value Chain Approach*

Theorizing stakeholders' relationship using Value Chain Approach (VCA) has remained an interesting area of research. It focuses on management and governance of how actors at the tail and head of the chain relate. In the case of the yam industry, rural farmers, local buyers, local sellers, processors, retailers and consumers have relationships that can be interlinked or skipped as it is shown in figure 1. The farmers are segmented into various categories i.e. small, medium and large-scale producers who sell their products either directly to consumers or retailers who are considered as the local buyers and by extension to exporters. In most cases, the yam producers sell their products to buyers who are only interested in the wider domestic markets because of the nature of the product and handling. Recently, the policy makers became actors who are interested in the export chain while incorporating the food regulatory bodies such as NAFDAC and Standard Organization of Nigeria (SON) who designs and enforces standards.

The socio-economic factors promoting the development of research in the yam industry are that of cultural beliefs and festivities that surrounds yam production, harvesting, processing and marketing. In figure 1 below, the structure utilized to examine actors relationship and governance takes its flow from the roles of multiple stakeholders, production, value chain, supply chain as well as consumption.

### *Trading of Value-Added Yam Products in Nigeria*

Historically, yam production has a long history which predated to the pre-independence period. Before 1960, when communities trade in cash crops there was no guideline for yam products trading since it wasn't considered as a very important crop that can be traded across the seashores to Europe. With the establishment of NAFDAC, many commodities were forced to embrace food safety standards to enable a safer market economy. The government policy on standardization built the trust of consumers on locally produced goods especially in the urban areas. The boom in the innovative yam flour production in Nigeria started with the emergence of two brands of packaged yam flour namely 'Poundo' yam flour and 'Ayoola' yam flour in the early 2000s and the products are still in the market creating brand competition. This particular value chain has been grossly

improved upon through technological innovations and handling capability. According to Olufemi (2018), reported that before the emergence of pounded yam flour, the popular ‘Amala’ yam flour has always been the favorite of many Nigerians. The significant change that occurred in the industry was marked by the massive intervention of the FADAMA fund that boosted production and processing. These enabled actors within the industry to substitute the traditional knowledge they are used to into a modern and technological driven approach and this engrossed the consideration of research into the industry.

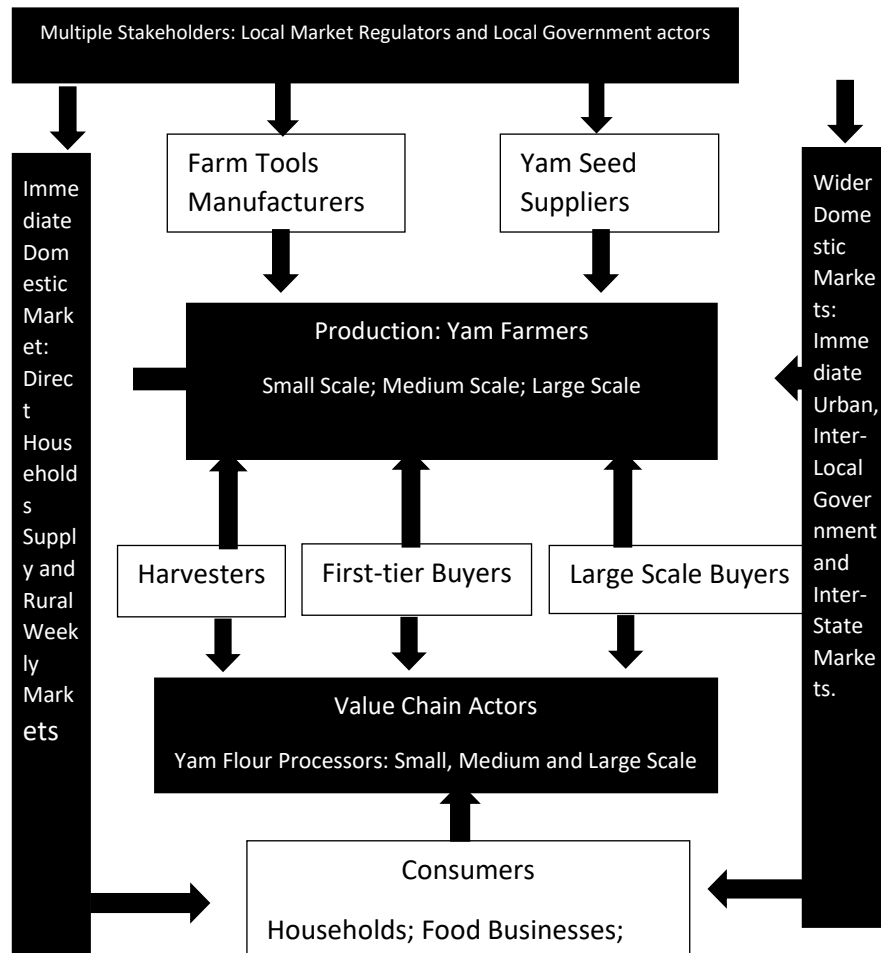


Figure 1: Depiction of yam value chains

Niger State, Nigeria epitomizes an exciting location for an empirical research in the yam industry. It’s a case study of where governance and standardization of the industry can be tested in terms of yam value added products such as yam flour. Rural Nigeria is generally constituted with feeble market associations and as such

governance of products, access to financial opportunities, technological competence and governance skills becomes difficult compared to what is obtained in the urban settings (Victor et al., 2020). Nigeria is one of the developing countries that have given serious priority to diversifying its economy by looking inward into the agricultural sector. This was done through agricultural financing and support mechanism to promote agriculture. Where smallholder farmers and actors participating in value chains within the rural context have been mobilized and supported by the government and the center (Victor et al., 2020). Also, in the aspect of penetration into the domestic market, there is flexibility of entrance while penetration into the international market proved to be inflexible due to the tough standards and guideline presented by the buying countries of value-added yam products. The production of yam in Nigeria is dominated by smallholder farmers mostly men assisted by their family members while processing and trading are mostly facilitated by women. This pattern of value and supply chain is what is obtained in the North-eastern, south-eastern and south-western parts of Nigeria.

### **3. Methodology**

This study used a qualitative method and structured interview as a procedure for its data overt technique. A total of nine entrepreneurs were interviewed, six from Gwada community of Shiroro Local Government Area (LGA) and three from Takunpara community in Paikoro LGA.

The study discovered that Gwada women predominantly engaged in yam value chain, whereas women in Takunpara engage in less participation in yam value chain but participate more in yam flour processing and supply. Atlas.ti was used for the qualitative data analysis. Notably, one of the challenges encountered while collecting data for the study is the Covid-19 pandemic restriction protocols and low level of production as a result of the activities of Bandits in the Shiroro axis.

### **4. Results**

#### *Findings: Standard and Governance of Yam Products in the Domestic Chain*

Trade interactions between producers and sellers of yam in the wider domestic chain in the Nigerian context have some distinctive antiquities. For instance producers of yam in Paikoro and Shiroro LGAs of Niger state have a unique relationship with buyers from the south-western states and history revealed that the relationship is dated back to the 1960's. Research also revealed that the Gwari speaking tribe of Niger state produce yam in abundant quantity (Nmadu et al., 2017) though, they use their indigenous knowledge to process it into yam flour but the reality is that processing methods varies and consequently, they don't perform efficiently to fulfill the demand of buyers in the wider domestic or international market (Oluwalana et al., 2018). Demand for yam flour is very high in the axis of Kwara state and Oyo state. This facilitated migration of many Yoruba speaking tribe into Paikoro and Shiroro local government areas of Niger state. They established processing clusters, they installed grinding and crushing machines as well as provided processing skill trainings not only for the Yoruba women but for their host as well. Recently, marketing companies in Lagos and Ogun States picked interest in yam flour supply chain emanating from Niger state and they frequently give specification so as to ensure that yam flour is processed and packaged base on

their demands. With the importation policy review of the Federal Government of Nigeria in year 2017, which specifically placed a ban on rice importation, but at the same time paved way for domestically produced food such as yam flour to find market within the immediate and wider domestic supply chain just as locally produced rice provided flexible relationship between producers, buyers and consumers. However up till the time this research was carried out traders still patronize yam flour from Niger state despite insecurity.

Findings from the interviews conducted with actors within the yam flour value chains in Paikoro and Shiroro LGAs revealed that governance of value chain is weak and largely unregulated. One of the respondents in Paikoro mentioned that “Government officials do not come around to check our activities, they only ask us to pay tax in the markets” Another respondent from Shiroro also said “We are free to take our products into the market without any check by the authority” while some consumers who were casually interacted with seems not to care about food safety or standard measures that ought to have been attached to value chain. Though the Nigerian government has saddled some agencies with the responsibility of checks and balances on food products safety, one of the most important of all is NAFDAC which serves as the food safety regulatory body in Nigeria that has made it compulsory that every food processing company must register. Part of the mandate of NAFDAC is to inspect processing facilities of all food products and sanction those who fail to comply by the guidelines. Some consumers may reject packaged yam flour products if NAFDAC registration number is not found on the packaged; whilst the regulatory bodies do a lot of inspection of facilities and if found not complying with the standard measures, sanctions would be imposed on the supplier.

Up till this present moment yam flour is still largely traded using the traditional method in the rural communities as well as in many urban traditional markets. One of the respondents mentioned that “Yam flour is best sold in the traditional market, we do not hawk or take it to supermarkets, this is because of its nature, unlike yam tuber that can be carried around”. This has grossly affected the level of respect actors have for the regulatory bodies especially NAFDAC. In many organized markets such as shopping malls where we can find food pantries the Nigerian government plays a vital role in ensuring that there is governance in sale of foodstuff. The NAFDAC staff interviewed during data collection made it clear that the agency is working towards extending their activities to the rural areas so as to ensure compliance using stringent measures. Factually, there are many unregistered SMEs operating within the rural settings and the country have the tradition of concentrating, implementing and enforcing strategic economic policies within the urban settings and in most cases policies do not have much impact on the rural actors and as such government usually do not have total control of the economic activities in the rural areas.

Research investigation revealed that yam tuber and yam flour markets are controlled by segmented and mostly small retail entities in Niger State Nigeria. In the rural communities of Shiroro, Paiko and Bosso LGAs there are huge numbers of impending yam producers and limited large buyers who mainly troop in from the

southwest. The value chain could be described as free market where the forces of demand and supply determine what transpires in the process of product supply. By implication, it means that, the capability of the yam flour producers to penetrate to the Southwest and other wider domestic chain depends hugely on the scrappy trading between suppliers and producers. These dynamics muddles the chain of protection required for accomplishing strict governance and standardization. Despite understanding that, certified products can easily fly in the urban organized markets.

#### *Research Implication*

In the rural context, implementing and enforcing standardization of food products is not the responsibility of the actors within value chains but rather that of the government, since food safety is not the only issue confronting value chains in this context. Producers have more challenging obstacles ranging from poor infrastructure to inadequate finance. In most cases, yam flour producers do not have adequate drying flaps, innovative knowledge and technological knowhow to enhance the process of production. Typically, not all small-scale producers have problem of low productivity but the incapacitated ones usually rely on the better tier producers to market their products and in the process of doing so products are collected and mixed together for sale regardless of the quality, this further belittle the quality of products in the market. NAFDAC may choose to enforce food safety standards on individual producer at the point of production and also target registered retailers who mostly do the value addition in the urban centers. However, many government and non-governmental projects have targeted value chains in Nigeria, in the course of their intervention, standards are being adopted or sometimes promoted, but the certification process and guidelines usually involve stringent measures. The sardonicism in all efforts to get rural entrepreneurs to be involved in standardization is that, those at the bottom of value chain are usually ostracized in the entire process.

#### **5. Conclusion and Recommendations**

Using the Value Chain Approach (VCA) to understand the yam flour value chain within the context of Niger State, Nigeria, it was discovered that rural entrepreneurs at the bottom of the value chain are the most important actors and the value chain is typically dominated by small and medium scale processors. In this research, the case studies were Paikoro and Shiroro Local Government Areas (LGAs) of Niger State, Nigeria. The buyers coming from the south-western region of the country established an entry point business relationship with the actors at the bottom of value chain who are mostly women. At the point of entry, the governance system is highly unorganized in the sense that a greater number of rural entrepreneurs involved are unregistered. The Value Chain Approach (VCA) in this research has been described as that of free-market oriented type, which indicates that the forces of demand and supply determines what transpires in the process of product supply.

Conventionally, Nigerian government have a governing body for all food products which is NAFDAC. Going by the fact that actors are unregistered, buyers do not have the courage to ask about sustainability and food safety standards for yam products and as such nobody cares about the safety measures. In the last one

decade, with the emergence of organized markets such as those situated within shopping malls and more specifically ShopRite, sellers have begun to demand for food safety certification to enable them participate efficiently in the competitive market. This new development had forced many small-scale enterprises to begin registering their companies through the Cooperate Affairs Commission (CAC) as well as the National Agency for Food and Drug Administration and Control (NAFDAC) but in the context of yam products value chain it has had limited control. This study, therefore, recommends that stakeholders relationship needs to be strengthened whilst state actors facilitate certification processes to encourage actors at the bottom of value chain to adopt food safety certification.

### References

- Abegunde, O., & Fabiyi, R. (2020). Nigeria-Benin Border Closure: Implications for Economic Development in Nigeria. *Journal of Humanities and Social Sciences Studies*, 2(4), 56-65.
- Adejo, P. E. (2017). Post-Harvest Management Practices of Yam and Farmers' Information Needs in the North-Central of Nigeria. *Journal of Nutraceuticals and Food Science*, 2(3), 1-7.
- Agba, S. A., Ode, I., Ugbem, C., & Nwafor, S. C. (2019). Impact of Yam Postharvest Activities on Standard of Living of Yam Farming Households in North-East Zone of Benue State, Nigeria. *Journal of Applied Life Sciences International*, 1-9.
- Ajibade, T. B., Ayinde, O. E., Abdoulaye, T., & Ayinde, K. (2018). Determinants of Price of Yam in Nigeria: A Time-Series Analysis. *Nigerian Journal of Agricultural Economics*, 8(2066-2018-4633), 109-119.
- Akanmu, P. M., Clement, J. O., & Samaila, M. (2018). Impact of cooperative microfinance on the performance of women entrepreneurship in Kwara state Nigeria.
- Bassey, E. E. (2017). Constraints and prospects of yam production in Nigeria. *European Journal of Physical and Agricultural Sciences Vol*, 5(1).
- Bekun, F. V. (2017). Economics of Yam (Dioscoreaceae Dioscorea) Marketing: New Insights from Bosso Local Government Area of Niger State, Nigeria. *EUropean Journal of Managerial Research (EUJMR)*, (1), 1-13.
- Iorzua, D. A., Ikwuba, A. A., Aan, J. T., & Nwafor, S. C. (2020). Post-Harvest Losses and Socioeconomic Sustenance of Yam Farmers in Southern Agricultural Zone of Nasarawa State. *Journal of Scientific Research and Reports*, 88-98.
- Kanu, I. M., Onwukwe, F. O., & Madufo, J. C. (2021). Analysis of Yam Marketing in Ngwa Road Market, Abia State, Nigeria. *Black Sea Journal of Agriculture*, 4(1), 33-40.
- Kolawole, O. A., Mishra, J. L., & Hussain, Z. (2021). Addressing food waste and loss in the Nigerian food supply chain: Use of Lean Six Sigma and Double-Loop Learning. *Industrial Marketing Management*, 93, 235-249.
- Nahm, H. S. (2011). *Quality characteristics of West African shea butter (Vitellaria paradoxa) and approaches to extend shelf-life* (Doctoral dissertation, Rutgers University-Graduate School-New Brunswick). Retrieved from <https://rucore.libraries.rutgers.edu/rutgers-lib/33959/>



- Naik, G., & Suresh, D. N. (2018). Challenges of creating sustainable agri-retail supply chains. *IIMB management review*, 30(3), 270-282.
- Naik, G., & Suresh, D. N. (2018). Challenges of creating sustainable agri-retail supply chains. *IIMB management review*, 30(3), 270-282.
- Nmadu, J. N., Coker, A. A. A., & Adams, E. (2017). *Determinants of climate change adaptation strategies of yam producers in Niger State, Nigeria* (No. 2223-2019-1760).
- Olufemi, A. S. (2018). Measuring and Assessing the State of Technological Innovations and the Level of Interaction between Rice Processors and Stakeholders in Rice Processing Industry in Nigeria. *International Journal of Business, Economics and Management*, 5(6), 164-175.
- Oluwalana, E., Oladeji, S., & Bello, A. (2019). Economic Analysis Of Yam Flour Processing In Saki, Oyo State, Nigeria. *J. Hum. Soc. Sci. Crtv. Arts*, 14, 30-46.
- Onyeke, C. C. (2020). Review of mycotoxins in foods in Nigeria. *Food Control*, 107376.
- Sidikat, S., & Rohaya M. (2017). Implementation of Sustainability Standard into Commodity Supply Chain Networks: A Processual Case Approach Published by International Journal of Academic Research in Business and Social Sciences. Volume 7, Issue 6 (June, 2017) Pages 52-62. DOI: 10.6007/IJARBS/v7-i6/2941
- Victor, O., Olufemi, O., & Samson, A. (2020). Assessment of Entrepreneurship Skills Needs of Small-Scale Farmers in Akpabuyo Local Government Area of Cross Rivers State, Nigeria. *Assessment*, 11(6).
- Victor, O., Olufemi, O., & Samson, A. (2020). Assessment of Entrepreneurship Skills Needs of Small-Scale Farmers in Akpabuyo Local Government Area of Cross Rivers State, Nigeria. *Assessment*, 11(6).