ECONOMIC DIVERSIFICATION AND SUSTAINABLE LIVELIHOOD IN NIGERIA- THE UNTAPPED POTENTIALS OF ANIMAL PRODUCTS PROCESSING

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ABSTRACT
The present nature of Nigeria's economy calls for a more satisfactory and accomplished discussion of economic diversification and sustainability of livelihood. One of the ways to achieve a successful and sustainable livelihood and development in our nation Nigeria is through exploiting the untapped potentials of animal products processing. In line with this need is the call for youth empowerment through the numerous value chains in the agricultural sector, particularly in livestock production, the government and non-governmental organizations must assist in the process of maximising the potentials of the sector. Potential areas of interest that are yet to be fully exploited in the value chain of livestock industry include the dairy industry such as milk, butter, yoghurt, ice cream, cheese production, the meat industry, hides and skin industry and lastly hitech animal products processing. It is therefore recommended that government create more awareness/sensitization programmes, reforms and policies on the above mentioned areas of livestock industry which are yet untapped and has the capacity of improving sustainable livelihood of Nigerians.
Key words: economic diversification; sustainable livelihood; livestock; animal products.

INTRODUCTION
Nigeria's current economic woes are primarily as a result of over-dependence on oil, a commodity presently known for its pricing volatility. The current economic quagmire has made many Nigerians to proffer solutions, while some are calling for a restructuring of the nation's political-economic architecture to free up the potential of the States; others have advocated the maintenance of the status quo, with greater emphasis on economic diversification. However, the present nature of Nigeria's economy calls for a more satisfactory and accomplished discussion of economic diversification.
The efforts to diversify the economy should be considered and implemented with a robust approach towards bolstering the economy. Livestock production is one of the sectors to focus on for the purpose of actualizing our economic diversification goal.

Livelihood is defined as a means of making a living; the various activities and resources that jointly determine the living gained by an individual or household (Carney, 1998; Oni and Fashogbon, 2013) while sustainable livelihood is when a livelihood can cope and recover from stresses and shocks while maintaining or enhancing its capabilities and assets both currently and in the future without undermining the natural resource base (Chambers and Conway, 1992). Livestock acquisition as a pathway out of poverty has been documented by Kristjanson et al., (2004). For example, livestock provide nutrients in the form of manure, a key resource particularly for the mixed systems. Livestock also serve as financial instruments, by providing households with an alternative for storing savings or accumulated capital, and they can be sold and transformed into cash as needed and so also provide an instrument of liquidity, consumption smoothing and insurance. For some poorer households, livestock can provide a means of income diversification to help deal with times of stress. As laudable as the efforts of the current administration are, it should be said that more efforts are still required in order to positively transform Nigeria's agriculture sector and turn it into a major revenue earner for the nation, as it once was. The issue of financing indigenous farmers has been a major impediment to the takeoff and growth of the livestock sector.

It is pertinent to note that commercial banks, with the exception of a few, are still reluctant to provide credit facilities to the agricultural sector, in spite of the encouragement by the Central Bank to do so. CBN has consistently encouraged commercial banks to meet and comply with their agricultural credit financing

thresholds through schemes like Nigeria Risk Incentive-Based Sharing System for Agricultural Lending (NIRSAL) and Micro Small and Medium Enterprises Development Fund (MSMEDF). One of such instances was during 262nd Monetary Policy Committee (MPC) meeting which held on 23rd July, 2018. Yet, many banks still fail to avail farmers' credit facilities. Understandably, Olagunju & Ajiboye, (2010) explained some of the reasons for the unwillingness of banks to give agricultural loans to be due to widespread subsistent nature of farming in Nigeria. Especially, in rural areas which makes it practically impossible for farmers and banks to agree on loan modalities combined with the illiteracy level of some farmers. Furthermore, the farmers are scared of the double digit-interest rate associated with these loans. There is also the issue of diversion of funds by some farmers.

Moreover, there is a varying degree of improper engagement of the youths in the agricultural sector which is in dire need of well-trained manpower and technological advancement. Emefele, the ex-CBN governor once made a remark that if a Nigerian farmer who died fifty years ago resurrects today, he can simply walk into a farm and carry on farming activities since nothing in practice and tools have changed.

Indeed, nothing has changed except the rhetoric. Dr Ahmed Adekunle, former special adviser to Minister of Agriculture, on mechanization in an interview in 2013 stated that "the farms in Nigeria are largely un-mechanized, with Nigeria having the lowest tractorization in the world in terms of intensity and density". Nigerian youths who are known to be dexterous and creative, can resolve most of these issues inhibiting modern day technology in today's farming. However, the youth cannot provide succour if graduates are not engaged in agribusiness. They need to be sensitized on the value chain of agriculture and the benefits it can provide. The Nigerian youth can provide the skilled manpower and managerial skills that are deficit within the sector considering the enterprising nature of some of these youth.

There is no doubt that having agriculture as one of the big revenue earners of our economy would be to our benefit. It will among other things, serve as a source of raw materials for agro-allied industries, help advance Nigeria's quest and march to industrialization. The citizens and government of Nigeria should be more proactive in improving this viable sector and harnessing its value chain to boost its contribution to the GDP and sustainability of our livelihood and economy.

THE UNTAPPED POTENTIALS OF ANIMAL PRODUCTS PROCESSING IN NIGERIA INCLUDE THE FOLLOWING AREAS

The following areas in animal products processing are yet underdeveloped and have not been fully utilized in Nigeria.

1) **DAIRY PROCESSING INDUSTRY**

   A dairy farm is a business enterprise established for the harvesting of animal milk – mostly from cows or goats, but also from buffalo, sheep, horses or camels which is not the case in Nigeria – for human consumption. A dairy farm produces milk and a dairy factory processes it into a variety of dairy products. These establishments constitute the dairy industry. The Director General of National Office for Technology Acquisition and Promotion (NOTAP) Engr. Umar Bindir observed that if half of the Nigerian population estimated at a hundred million consume a glass of milk estimated at only N100 per glass, it could generate N10 billion per day which in turn could create millions of jobs and translate into a N300billion monthly revenue. Examples of dairy products include milk in its various forms, cheese, yoghurts, ice cream, curds, butter, chocolates and a host of others. These dairy products have various industrial applications.

2) **MEAT PROCESSING INDUSTRY**

   The areas of this industry that have untapped potential in Nigeria include:

   Sausage Production.

   Sausage is not native to the tropics and it is not very popular in Nigeria. Its production requires some refrigeration, which is naturally not present in the tropics. It is produced by foreign culture. However, Nigeria through technology can establish sustainable Sausage production.

Sausage products are molded in casings, either natural or manufactured. Except for plastic film, most casings are permeable to smoke and moisture. The process of placing into casing is referred to as stuffing. Two types of casing in general use are natural and manufactured or artificial casing. Natural casings are prepared from intestines of cattle, sheep, goat and swine. Natural casing are salted after they are cleaned in approximately 40% salt. Manufactured casings could be in form of cellulose, inedible collagen, edible collagen and plastic. Plastic casing is used with products that are not smoked as they are impermeable to smoke and moisture.

Kilishi

Kilishi is a meaty snack that originated from northern Nigeria, made strictly from lean beef thinly sliced from fillet, which is then either sun dried or oven dried. Soaking the meat in a spice solution containing a mix of groundnut, garlic, ginger, onion, pepper and salt completes the preparation process before it is spread to dry. Kilishi for more than a century is a snack that has financially sustained local families in many states of the north such as Sokoto, Borno, Kebbi, Katsina, Kano, Taraba, Jigawa, Niger, Gombe, Zamfara, Bauchi, Adamawa and Nasarawa, while Kaduna and Abuja. However, kilishi is yet not well known or popular in the Southern and Eastern part of the country. There is high potential livelihood if these parts of the country can adopt this method of meat processing. In addition, few kilishi makers who are mainly local men, have to face irregular power supply, poor drier/oven management, the lack of a conducive environment for production and selling, health-inspired distrust by a section of the populace towards the product and a weak network for selling. They most often use the local/traditional method of processing which is sun-drying. This technique makes it difficult for some people to patronize the industry due to the fear of how unhygienic the kilishi might be. If only the government can support this industry, it will curb unemployment not only in the north but in the entire country and will boost the country's GDP.

3) HIDES AND SKIN INDUSTRY

The wide dispersion of the slaughtering points across the country, along with the lack of proper slaughter houses and high consumption rate of hides and skin of livestock, all these has negative impact on the volume and quality of hides and skins entering the formal market chain. As a result, all available raw materials are not recovered; a considerable proportion is wasted before reaching the tanneries, the final consumers of the raw hides and skins. Despite some development interventions made by the government, hides, skins and the leather industry are still constrained by the poor quality of raw materials, lack of an efficient market structure, a weak extension service, competition from local/rural tanning industries, and a lack of price incentive for production of good quality raw material (Wayua F. O. & Kagunyua A.,2012). There's need to move from the traditional method of preservation of hides and skins to modern preservation technique. The traditional method, which was dominated by ground drying, sun drying, bathing/soaking of hide, pole drying, smoking and pegging of sheep and goat skins on walls, shifted to frame drying of hides and skins

Constraints of hides and skin industry include**:** shortage of raw materials, quality deterioration, inadequate numbers of slaughterhouses/ slabs and gap between demand and potential supply.

4) NANOTECHNOLOGY- HITECH ANIMAL PRODUCTS PROCESSING

Brunori et al., (2008) see nanotechnology as potentially a highly disruptive driver, and the ongoing debate as to the pros and cons is currently not well informed by objective information on the risks involved: much more information is required on its long-term impacts. Nanotechnology could redefine the entire notion of agriculture and many other human activities (Cuhls, 2008). Nanotechnology may be the important tool to augment the livestock products to fulfill the future demand. By the exploitation of the use of nanoparticles we can produce meat, milk and poultry products in much faster pace with high safety. Nanotechnology may serve the purpose of vegetarians who are willing to eat high proteinous food without killing the animals in form of in-vitro meat, cultured meat or laboratory grown

meat. The nutritional quality along with quantity to fulfill the stomach of hungry peoples in the coming year's nanotechnology may be the modern weapon.

CONCLUSIONS

Livestock production is one of the sectors Nigeria should focus on for the purpose of actualizing our economic diversification. Dairy industry has not been fully exploited as there are many value chains in this industry. Nigeria through technology can establish sustainable Sausage production. If only the government can support kilishi industry, it will curb unemployment not only in the north but in the entire country and will boost the country's GDP. There's need to reduce kpomo consumption in Nigeria and to move from the traditional method of preservation of hides and skins to modern preservation technique. Nanotechnology may be the important tool to augment the livestock products to fulfill the future demand.

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