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Creative Indigenous Technologies in the Transformation of the Groundnut Industry in Central Nigeria

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I. INTRODUCTION

In the agricultural sector, Nigeria's as a nation is greatly endowed with tremendous agricultural resources and potentials particularly in the production of groundnuts, cereals, yams, cassava, etc. The introduction of these cash crops into the Nigerian society dated back to the era of the Trans Atlantic Slave Trade in the discourse between the New-World and Africa which witnessed the introduction of several cash crops into Africa and Nigeria in particular.

As from the age of European colonization of Africa, by the 20th century, in Nigeria these cash crops became important natural resources for the rural income earning of the local population as well as the national income earning of the Nigeria nation. For Nigeria, during the colonial era (1864-1950s) agriculture, particularly the cash crop driven economy provided for over 70% of the national income of the nation as well as provided employment level for 80% of the nation's population. Despite the predominant role of agriculture in the Gross Domestic Product of the nation (GDP) the several and methods of production and processing of agricultural cash crops were confirmed to crude techniques of production such as the hoe, cutlass, bush burning, shifting cultivation and several land holding practices

which were inimical to agricultural transformation. The methods of storage as well as marketing strategies remained crude and primitive.

As from the 1970s and the 1980s, through several economic policies and programmes such as the "Green Revolution", Operation Feed the Nation, the Structural Adjustment Programmes, deliberate efforts were made to revolutionized the techniques of agricultural production as well as processing and packaging of agro allied products. This marked the emergence of agro allied industries based upon the evolution of indigenous technologies and industries. Several states and national governments, as well as the private sector, seized the initiative to embark upon medium scale agro industries in the processing, production and marketing of primarily agricultural materials such as groundnuts, yams, corn, grain, etc. This paper takes the position that further research and investment in the evolution of indigenous technologies in the agro-industry will enable Nigeria emerge as an industrialized nation by the twenty first century. The hurdle to such a national transformation however lies deeply in traditional cultural practices which still are endemical to agro-industrialization and national transformation.

II. PROBLEMS IDENTIFICATION

This research work intends to resolved the following research problems identified

- Local household industries in groundnut oil processing depend upon crude technology that is well primitive. This research work will resolve this problem by providing update technology in the processing of groundnut oil.
- Crude technology produces little output in terms of quantity and volume. The update technology will eliminate this problem by providing for mass production thereby increasing quantity for the market.
- There is the problem of unemployment and poor wealth creation among youths in rural areas. This new technology will provide jobs for the teeming youths in the rural areas.
- Due to lack of industries in the rural areas, there has been an rural urban migration drift. This technology

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will resolve this challenge by curbing rural urban migration.

a) *Conceptual and Theoretical Issues*

Every society in world history had a form of local technology which provides the basis for the gradual technological evolution of a given society. History has demonstrated that all societies in world history, from Asia, Africa, Europe and America, through the domestication of iron technology, developed a peculiar technological process, adapting to the domestic needs of the environment. The evolution of man, from a Homo Glabris to a Homo Sapien, clearly indicates the ability of man, based upon his capacity to think and reason, to invent tools, work and occupation. This process of human evolution, the ability to think and reason, invents tools and work, clearly distinguished man from other world of animals. The invention of work and occupation produced in man a social consciousness and awareness that he exist, the assertion, I exist, which distinguished man in the material history of the universe. Local technologies were first produced from wood, stones and eventually, the discovery of iron and other metals, which began a great revolution in the ability of man to invent tools and machines, domesticate the environment around him and reproduce his material livelihood.

Man in his material history and evolution remained a hunter and gatherer for several thousand of years until the emergence of sedentary forms of life in which cluster of human population began to emerged around the banks of Great Rivers in world history such as the River Nile, River Euphrates, the Mediterranean Sea, the Great Chinese River, River in India, etc were the greatest early human civilizations emerged in world history.

One of such greta ancient civilizations that emerged on the banks of River Nile and the Mediterranean sea was the Egyptian civilization which dates back to thousands of years ago. In Egypt, there was the evidence and existence of scientific and technological inventions in the agro-allied sector such as the invention of the grinding mill, wine press, longator technology, construction of dams, storage of agricultural products, etc. The legacies of the Egypt civilization provided the impetus for the spring up of the Greek and Roman civilizations in world history.

In the West, particularly Britain, France and Germany, technology evolved as a process of adopting and copying from the technological inventions of Asia and Africa as well as improving on the existing technologies through surplus capital investment that was derived from the plantation economy in the New World through the forced black slavery in plantations. The Willens in his work "Slavery and Capitalism" showed a great deal of relations between point ploughed from slavery and invested in the technological drive of

Western Europe subsequently resulting to the Industrial Revolution of the 19th century. Walter Rodney "How Europe Underdeveloped Africa" also supported this assumption that Western European industrialization was the outcome of her human and material exploitation of Africans and the Americans. Whatever the polemics, by the 18th – 19th centuries, the West became an industrialized technological drive nations that came to overtake the rest of the world in her material transformation.

As far back as the 1940s and the 1950s, in the United States of America, there were strong agreements led by modernization theorist who upheld the view that the path to technological and industrial transformation of the Third World nations like Nigeria lied in a technological transfer through foreign investment in capital and skills. The solution to Africa backwardness, particularly Nigeria, was a cultural modernization which would eliminate cultural bottlenecks inimical to the industrial and technological transformation of the Third World countries. Furthermore, what the Third World needed to do was to encourage good governance through public accountability, transparency, trust, fiscal and monetary discipline.

However, the experienced of industrialized nations like Japan, China, Korea, Taiwan, etc clearly showed that too much over reliance on a foreign technological transfer was not one key to a nation technological industrial transformation. In addition to foreign investments, the basic key to technological transformation is often rooted in exploiting, harnessing and the utilization of the indigenous technology base state of a nation to achieve technological growth. In Africa, European colonization of the continent had almost destroyed the existence of indigenous technologies, craft and industries. The pathway to technological transformation however lied in exploiting the technological resource of the indigenous Africa societies. Recognising the strong need for an indigenous technological drive towards national transformation, a former minister of science and technology in Nigeria, Prof. Emmanuel Omoben pointed out that;

The need for technological development of every nation has become one of the most acknowledged issues in recent times. And the agitation for a need to base such development essentially on the indigenous cultural and engineering resources had become even more pronounced.

Africa and Nigeria in particular, has no choice but to mobilize her indigenous cultural engineering resources to achieve technological growth and national transformation. In recent history, there are crucial attempts to create a technological development rooted in the indigenous cultural resources of the Nigeria people.

III. AGRICULTURAL DEVELOPMENT AND PRACTICES IN NIGERIA

The age of British colonial rule in Nigeria marked the commercialization of yams and groundnuts on a mass commercial scale as cash crops that contributed significantly to the Gross Domestic Product of Nigeria as well as the Gross National Product of the nation. In the northern region, under the regional system in Nigeria as from 1946-1967, the groundnut pyramids at Kano, sustained by the railway system for an export bound economy to Europe, provided the major revenue base of the regional northern government led by the Sir Ahmadu Bello, the Saruwa of Sokoto. Yams were also produced in several tonnage, transported by rail and exported for the export bound economy. Throughout the colonial era, these agricultural cash crops, yams and groundnuts, were produced using indigenous leisure time, exported to Europeans raw materials. In Nigeria, the export bound economy of agricultural raw materials discouraged the existence of agro-allied industries which could transform the raw materials to finish products. British colonial policies rather encouraged the existence of a consumer driven society which degrade upon the importation of western manufactured products.

In the West, Europe supported the industrial base that came to depend on the export of agricultural raw materials for the survival and sustenance of the industrial system in the West. Europe needed Africa for the export of raw materials while Africa needed Europe for the importation of manufactured goods and services. This reciprocal relations was captured in the Lord Lugard Dual Mandate that;

Europe needed Africa for her raw materials and minerals while Africa needed Europe for her manufactured products, capital and skills.

Lord Lugard argued that European colonization of Africa was of mutual benefit to both European and Africa. However, the importation of western manufactured products, the consumer driven economy in Africa, discouraged the growth of local industrialization and technology. What happened was the near collapse of crafts and industries which locally produced goods and services in Africa.

In Africa, on the yam and groundnut plantations, the production and processing of these cash crops largely depended upon the use of primitive ways of production, processing and storage. In Africa, the Christian missionaries invented the idea of the "Bible and the Plough" in which the techniques of production of cash crops were factored in the use of the hoe and cutlass, exploiting manual and physical labour on the plantation. The use of crude implements of production as mentioned above supported the yam and groundnuts plantation holdings in Nigeria. However, the story was not entirely that of the exploitation of crude manual

forces in the production of agricultural raw materials. The British colonial system, through agricultural extension services, provided critical inputs for farmers in the production and processing of cash crops. On the several plantations and demonstration farms which were established in Africa, farm inputs such as insecticides, fertilizers, improved seeds and varieties, as well as techniques of processing and storage were provided for farmers. The British agriculture extension services provided some basis and elementary farmers' education that enabled rural farmers in Africa cope with the challenge of cash crop production.

Abumere S.I. in J.S. Oguntoyibo et al (ed) *A Geography of Nigeria Development*, examines the dynamics of agricultural systems and practices of farming as well as their national demand and supply requirements. The author assessed the hindrances in the food supply network and reaction by the farmers to innovation in agricultural and economy. According to him, most of the food crops produced in Nigeria is through traditional agricultural system which is predominantly through small holding farming using rudimentary tools like hoe, cutlass, axes and knives. He contends that the irrigated agricultural system involving natural irrigation "provided by seasonal flooded swamp or fadama land..." and artificial irrigation where dams or other water sources supplement natural water sources. By this the author contributed to the understanding of the activities of the Lower Benue River Basin Development Authority especially in terms of water supply through dams and irrigation to the development of agriculture in Tivland. However, Abumere work is not spared of shortcomings. His assumption that most of Nigeria's agricultural productions are largely done using rudimentary tools is far from the truth since both individuals and government all over Nigeria have made concerted efforts at farm mechanization in planting and harvesting. This can also be seen in the activities of the Lower Benue River Basin Development Authority in Tivland which is as well our area of study.

A.O. Falusi and S.O. Olayide's "Agricultural inputs and the small farmers in Nigeria" in S.O. Olayide, (ed) *et al Nigeria Small Farmers: Problems and Prospects in Integrated Rural Development* examines the role played by agricultural inputs on small farms to the overall productive capacity of the Nigerian agricultural sector. This paper suggests that land and labour constitute the main inputs used by small farmers in the production process. They say that human labour accounts for more than three quarters of all farm operations. The source of labour on these farms according to them comes from family labour. They add that most of the problems encountered by the small farm in Nigeria are due to the traditional or rudimentary technology in use together with low productivity occasioned by the use of these traditional inputs. And lastly, it is the demand for farm inputs for the

management of tree crop farming. The author lists two main types of modern farm inputs, which are needed by the small farms for improved productivity. These include “fertilizers, improved seeds, plant protection chemicals, feed and mechanization equipment or tools. Second is water in terms of the provision of irrigation equipment or tools. Second is water in terms of provision of irrigation equipment and water facilities...” They contend that even though the use of the aforementioned inputs is necessary for improved production, their supply is low, grossly inadequate or completely lacking. They argue further that water is a necessary input for increased food production. Adding that drought had adversely affected food production especially in the early 1970s in Northern Nigeria. To solve the water problem, the federal government established the River Basin Development Authorities for the development of the Nations’ water resources. The author’s claim that land ownership rights in the northern states being only “crown or public ownership” is not historically tenable. Pre-jihad Hausa land operated the communal system of land ownership. Similarly, pre-colonial Tivland also operated the communal system of land ownership. Apart from the above omission, the chapter is relevant to our research especially in its analysis of the vital role, which modern farm inputs could play in food production by small farms.

In *Readings in Nigerian Rural Society and Rural Economy*, R.K. Udo posited in his article christened “farming activities of migrant farmers” that people migrate from other places and settle for agricultural activities where they face a lot of challenges like access to land. This paper is relevant to this study because, in spite of the efforts of the Federal Government of Nigeria in expanding agricultural production through mechanized farming by the provision of tractors and construction of dams and irrigation facilities for farmers in Tivland, there is still migration of people from Tivland to other places like Taraba, Nasarawa, Plateau and Adamawa for farming. Thus, it is pertinent to understand that the inefficient functioning and uncoordinated distribution of irrigation infrastructures and dams have led to this migration. Udo contends that crops meant for the market are grown on larger farms than those crops meant for consumption. This means that large irrigation farm projects can enhance the production of large quantity of crops that can in turn be used for markets. This is an area where this book is important to our area of study. The idea for the provision of mechanized agriculture, dams construction and irrigation infrastructure were among other functions of Lower Benue River Basin Development Authority to facilitate large production of agricultural output. Moreso, this chapter provided a historical synopsis in the colonial agricultural policies in migrant tenant farmer but did not look at the post-colonial; policies that have acted as push factors in the migration farmers from Tivland could have been

because of infertility of the soil accentuated with lack of fertilizer, water during dry season with which effective projects of the Lower Benue River Basin Development Authority could have resolved through irrigation of portions of farm land allocated to farmers. This is the area that this research hopes to contribute especially in looking at the impact of the activities of Lower Benue River Basin Development Authority like farm mechanization and irrigation projects to the development of agricultural activities in Tivland.

Vermeer D. has also provided very useful submissions in the understanding of the study. His article “Food Sufficiency and Farming in the Future of West Africa” in the *Journal of African Studies* examines the kind of role played by traditional agricultural practices in promoting food sufficiency in the West African region. He argues that certain factors inhibit the smooth operation of traditional agriculture such as “rising cost of fuel, fertilizer, labour, migration for labour which takes away manpower from the rural areas to location of industries, wage differentials between urban and rural areas and prices of food stuff. He emphasized that the West Africa countries were affected by the low agricultural production of the 1970s especially 1973 and gives factors responsible as climate conditions such as drought, pricing policies on food stuff, migration from rural to urban areas and inadequate infrastructure. Thus, with these problems he failed to identify the solutions applied by the Nigerian Government in the provision of water as a check-mating approach to the draught through the establishment of Lower Benue River Basin Development Authority to enhance water supply for industrial, agricultural activities and domestic uses. With this notification, the impact of the Lower Benue River Basin Development Authority in its catchment area including Tivland could have been more appreciated. It is therefore, the hope of this work to carefully study the establishment of Lower Benue River Basin Development Authority and also look at the future of food sufficiency and farming activities in the future of West African countries as D. Vermeer suggested.

M.O. Odey in his paper “Policies and Performances of Agricultural and Non-Agricultural Sectors of the Economy of Benue State since 1976: A Comparative Analysis” Agricultural and Environmental Issues in Nigeria took a critical reflection on the impact of ever-changing government efforts at the development of the economy of Benue State. He noticeably surveyed the industrial development of Benue State with emphasis on the First Development Plan 1975-1980 where he carried out a study with statistical results suggesting about 20 industrial projects were actually established by the state government such as the Benue Brewery, Otukpo Burnt Bricks, etc. Odey in the agricultural sector articulated that, with Benue State assuming the status of “food Basket if the Nation”, it is subsistence driven mostly by small holder family groups

using crude implements and where farmers depend on natural weather conditions. He adds that even though the state is a major producer and exporter of crops like soya beans, yams, etc. It is uncertain on the percentage retained for domestic consumption hence he says, “we have carefully demonstrated the boomerang effects of the Beubue food stuff trade as an illustration of the dialectics of hunger and rural poverty...” Odey’s work is relevant to this study because it exposes the nature of agricultural development in the state through a feasibility analysis.

E.T. Orgbe’s work, title “The Effects of National Development Policies on Rural Development: A Case Study of Lower Benue River Basin Development Authority is also very significant in the generation of data for this research. Orgbe has carefully surveyed the impact of Lower Benue River Basin Development Authority with particular emphasis on the supply of water through dams and boreholes. He argues that the authority has over the years remained supportive to economic development through water supply for rural agricultural economy and that has expanded the scope of crop production. The work is however characterized by its failure to look at the actual implementation and In Nigeria, the 1970s and the 1980s, with the decline in the fortune of crude oil, marked a turning point in the massive investment of the Nigeria state in the agricultural sector. As far back as 1978, through the Operation Feed the Nation programme of General Olusegun Obasanjo, attempts were made through the River Benue and River Niger Basin Development Authority to promote the mechanization of the agricultural sector through the importation of critical agricultural infrastructure like tractors, harvesters, longation, dam construction, storage facilities, etc. The state also through cooperative societies and agricultural banks provided inputs such as capital and loans for commercial farmers to emerge. These efforts, laudable and desirable, achieved little results.

The Operation Feed the Nation was followed up by the Green Revolution of the president Shehu Shagari (1979-1983). The Green Revolution in its contextual and theoretical framework was to commercialise the agricultural sector as the key to the Industrial revolution of Nigeria. To achieve the laudable objective, national agricultural bank was established to provide loans to farmers’ cooperative societies at the rural areas, feeder roads were opened up, fertilizer blending plants were established and the emergence of a medium agro-allied entrepreneurial class was patronized and promoted by the state. The Structural adjustment Programme of General Ibrahim Babangida era (1985-1992) consolidated in the gains of the Green Revolution through the creation and sustenance of a medium and small scale agro-allied entrepreneur class in Nigeria. Through the import and export substitution programmes, the President Babangida era, succeeded

in the encouragement of the growth and evolution of indigenous technology in the application of the agricultural sector. The era, marked the age of the emergence of indigenous technologies in the agro-allied industry, a critical key to national transformation.

IV. HISTORY OF GROUNDNUT PROCESSING IN CENTRAL NIGERIA

As far back as the colonial era, groundnut processing and the extraction of groundnut oil became an important domestic household industry among the female population of the Nasarawa ethnic group of present day Nasarawa state. Groundnut processing was experienced in places such as Kadaroko and Keana in Keana local government of Nasarawa state but the large concentrations of groundnut processing household industries were in Nassarawa-Eggon local government of Nasarawa state spreading to other areas such as Doma local government areas as well as Lafia local government areas.

The colonial economy through the colonial state exacted much demands on the processing and exports of groundnut as an export cash crop as a means of national income earning. In Northern Nigeria, the mainstay of the economy from the age of colonialism up to post-independence era was factored upon the production and export of groundnuts and other agricultural raw materials as the major income earnings of the northern region. Against the backdrop of the exigencies of the cash crop induced economy, groundnut products as well as its exportation became a major economic and commercial activities of the Nasarawa people who were part of the Northern region at that time.

Household industries mobilised factors of production such as labour and capital in the production as well as the processing of groundnuts for the export economy. Available statistics, during the colonial era, showed that groundnuts were an important export crop of the Nigeria state. The engine that drove this commercial enterprise was the household cottage industries managed by some men and women. Below is a table indicating statistical data of the groundnut earnings during the colonial era.

District	Year	Tonnes	Income Earning (£)
Nassarawa-Eggon	1935-1950	10,000	15,000
Keana	1935-1950	15,000	20,000
Lafia	1935-1950	5,000	5,000

In the post-independence era, agriculture continued to feature as the main stream of the economy of the Nigerian state. The bedrock of the Nigerian economy revolved and rotated around small scale and medium scale agro-allied industries managed by

households across the nation. In Nasarawa state, the prominent areas in the groundnut processing and production which as stated earlier on were in Keana, Kadarko, Nassarawa-Eggon, Doma and Lafia which were heavily inhabited by an influx of Eggon, Tiv, Alago and Bekwarra population who provide the labour for the production of groundnuts. Available statistics shows that groundnut became an important household cottage industry providing a sustainable income earning for the teaming rural population of Nasarawa state. In addition, the processing of groundnuts into oil provides important bedrock for the boost of the domestic trade between Nasarawa and other states within Nigeria and even the export trade. Below are figures in respect of this development.

a) *Groundnut processing and exports*

Local Government	Year	Tonnes	Income Earning (₦)
Nassarawa-Eggon	1960-1970	17,000	600,000
Keana	1960-1970	12,000	800,000
Doma	1960-1970	3,000	4,000
Lafia	1960-1970	2,000	3,000

In contemporary times, from 1996 to the present, when the local government of Keana, Nasarawa-Eggon, Doma were created, groundnut processing has remained an important bedrock of the small scale and the medium commercial enterprise providing a basis for both domestic trade as well as export trade. These local governments by the National Population Census of 2006 had a population of over 600,000 people. In addition, the groundnut cottage industries, which largely depend upon crude indigenous technology in the processing of groundnuts, provide a good income earning as well as job creation in Nasarawa state. Below are statistics of this respect:

Local Government	Year	Tonnes	Income Earning (₦)
Nassarawa-Eggon	1996-2011	5,000	2000,000
Keana	1996-2011	6,000	2.500,000
Doma	1996-2011	3,000	600,000
Lafia	1996-2011	2,000	400,000

b) *Groundnut processing; Job creation and income distribution*

Local Government	Job Creation	Income Distribution (₦)
Nassarawa-Eggon	10,000	800,000
Keana	7,000	500,000
Doma	3,000	400,000
Lafia	2,000	350,000

c) *Origin of Indigenous Groundnut Oil Processing Industry in the Colonial Era*

In the colonial age, the processing of groundnut oil through the extraction of oil from groundnut seedlings was located in the domestic household enormous of food process and chain owned and controlled by women.

It is not certain in exact terms how the technology in the processing of groundnut oil began. Oral accounts indicate that the migrant population of Hausa migrants from the far North poured out into central Nigeria with the relevant domesticated technology that could process oil from groundnuts. In the major cities and towns across central Nigeria, Hausa migrants controlled the processing as well as trade in groundnut oil and its allied products such as groundnut cakes. In the central Nigeria towns of Jos, Lafia, Makurdi, Oturkpo, etc, Hausa migrant's traders enjoyed a specialization in the area of groundnut food processing.

During the colonial period, there was a direct synergy between rural indigenous population such as the Tiv, Idoma, Eggon, etc who produced groundnuts as cash crops for the colonial economy, or, the urban based Hausa migrant group with skills and capital to process groundnuts to finished consumer items such as oil and cakes. A survey in the existing markets across central Nigeria during the colonial era such as Makurdi, Abinsi, Lafia, Jos, Oturkpo showed that Hausa migrants dominated over Eighty percent of the trade in the groundnut oil process while the Nigerians population served basically as primary producers of the raw – materials that feed the domestic household economies of the groundnut food industry.

As stated earlier on, there is no gainsaying the fact that groundnuts was a major natural income earning crop of the central Nigeria people thus providing the basis for income generation as well as revenue profile for the colonial states. Despite the strategic role of the groundnut industry, the technology in the processing of its raw – materials to finished products was largely crude, land restricted to the domestic front. Despite the limitations imposed by crude technology, the oil processing industry provided creative economic outlets thus generating wealth and income for the Hausa commercial class.

Migrants populations on central Nigeria like the Bekwarra adopted a crude method of crushing groundnuts using their multiple fingers on the bench and table. However, this process, despite its fastness in the processing of groundnuts was often slow and powerful. With the advent of the small hand machine that could crush groundnuts breaking off the nuts, the processing of groundnut oil had reached a technological stage through the use of machines. The small scale machines were portable, adaptable and easy to manipulate by women and children within the

household economies. The invention of the hand crushing machine was an important step in evolutionary technological advancement of the groundnut oil processing. The technology, domesticated within the household economies, marked an important step in the revolutionary trend in the food processing industry in Nigeria during the colonial age. In the emerging commercial towns of Makurdi, Lafia, Jos, Oturkpo, Hausa migrant traders domesticated the indigenous fabricated technology in the production of oil and its allied production.

d) *Groundnut Processing Industry in the Post Independence Era*

In Nigeria, after the independence era as from the 1960s, agriculture still remained the bedrock of the economy of the nation providing for over 70% of the national income economy. Agriculture provided the cornerstone of the main stay of the economy of Nigeria up to the 1970s which the prospects of crude oil overshadowed the gains made by the agricultural sector. Despite the decline of agriculture as a major national income earning, the sector still accounts for the 60% of the employment generation of the Nigeria nation.

Given the predominant role of the agricultural sector in the 1960s and the 1970s, the oil processing of groundnut into finished products received a major boost under the nations Operation Feed the Nation programme and the Green Revolution programmes launched in the 1970s-1980s with the primary purpose to mechanize the Nigeria's agricultural sector. Through the intervention of foreign technology in the agro-allied industry, important agricultural sectors such as the processing of seedlings – cereals received a boost through a deliberate mechanization of the sector. As far back as the 1960s, giant subsidiaries like the Lever Brothers and the United Africa Company established their subsidiaries on Nigeria with the aim of processing food raw materials into finish products. This deliberate transfer of foreign technology gave impetus to the transformation of the food processing industry in Nigeria particularly that of groundnut oil, soya beans oil, beniseed oil, palm oil, kernels, etc. industrial developments in the agricultural sector in the 1970s and 1980s accelerated the evolutionary trend of food processing agro-allied industries in Nigeria.

The groundnut oil processing industry received a boost of the evolution of technological innovation needed on the processing and extraction of groundnut oil and other allied products. As from 1980s, through the deliberate programmes of state induced industrialization launched out by respective national and state's government, the hydraulic industry in the processing of oils, witnessed a dramatic turn-around in the design and the fabrication of modern industrial factories for the processing, package and export of food oils from Nigeria. The food oil sector became an important

milestone in Nigeria's export as well as important bedrock for the triumph of small scale and medium enterprise across the central states of Nigeria. For instance, Aper Aku conceptualized the Taraku mills which were translated into reality during the Governor Adasu's era. The Taraku mills, a multipurpose hydraulic mill could transform raw cereals and nuts such as soya beans, groundnuts, beniseeds, castors seed, cashew seeds, etc into domestic turkey oil, aviation fuel, as well as other allied products.

In various forms and different directions, hydraulic oil technology became domesticated through a process of indigenous diffusion across central Nigeria. In recent times has witnessed the design and fabrication of indigenous oil mills and factories which has come to transform the industrial landscape of the central Nigeria people. In almost all the commercial and urban towns of central Nigeria, there are thousands of private owned and controlled oil mills providing unemployment as well as wealth creation for the teeming unemployed population of the region. Available statistic shows that the groundnut oil mill industry provides a monthly income of more than one million naira to the population engaged in the industry. Statistics also shows that over millions of people are engaged in the industry from the processing, the industrialist, to the marketers of the finish products in the markets and streets. This is a lucrative industry for national income earning, wealth distribution and national economic transformation for the nation.

There is gainsaying the fact that since the 1990s, the central states of Benue, Nasarawa, Taraba, Plateau, etc have all made the small scale and medium enterprise as the cornerstone of their economic recovery programmes. These states have established bureau for small and medium enterprise as well as microfinance credit institutions to fund the sectors from the billions and trillions of dollars pumped in by the World Bank and the Federal Government through the Central Bank. It is the major pillar of the current administration effort of President Goodluck Jonathan to provide mass employment ease youth restiveness, distribute national wealth.

V. CONCLUSION

The experience of nations of the Asian Tigers such as Japan, China, Indonesia, Malaysia, Taiwan, etc have proven overtime that industrial success can be achieved through the recycling and adoption of post existing indigenous industries and ideas into modern industries. The Asian Tigers adopted the approach of research in the historical past of existing indigenous industries, through a process of education, by evolving ideas from the past to the present. The industrial success of pre-colonial past laid the foundation for the evolution of such industries into modern industries

complex. The point is that recycles and evolves past industrial ideas to achieve modern industrial success.

Nigeria, like the Asian Tigers came under the wake and domination of European colonialism. However, the Asian tigers did not allow their past indigenous industrial and technological success to total collapse or disintegrate as it is in Nigeria. The past is a vital tool in the reconstruction of the present. Past ideas, economic ideas can be recycled into the present, through a process of innovation and creativity to achieve some significant level of national economic transformation and success. The thrust of this presentation is to look at the industrial success of the central Nigeria people and how that can evolve into a consciousness of viable industrial transformation of the area in the present.

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