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Occupational Vat Dyeing Practices in the Kano Metropolis of Nigeria Part 4: Challenges and Prospects

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ABSTRACT

Indigo dyeing is far from thriving in Nigeria and therefore youths in Kano metropolis including traditional indigo dyers of "Kofar Mata" follow the trend of dyeing textiles with synthetic vat dyes and chemicals. Currently, competition with the Chinese and high cost of chemicals are likely to render over 30,000 dyers and traders jobless. The aim of the research is to determine the challenges and prospects of vat dyeing occupation in Kano metropolis, Nigeria. A structured questionnaire was administered among 1387 dyers selected purposively together with focus group discussions with dyers and vendors from 'Kantin-Kwari' cloth market. Findings revealed that among the challenges faced by the dyers, lack of capital, high cost of production, low patronage and competition with imported textiles are more prevalent. The dyers believed that the venture/occupation was lucrative before the 3rd quarter of 2015 basically because the Country's economy was better and there was little or no competition with the Chinese in the dyeing business as at that period. Most of the dyers can dye over 20000 yards (> 18288 m) of fabric weekly as at then but the number has reduced to not more than 400 yards (not >365.76 m) at present due to the current economy and foreign competition. The dyers believe that government can help revive the dyeing occupation especially by improving the economy and banning importation of coloured textiles which will otherwise subject them to the same fate as traditional indigo dyers.

Keywords: vat dyeing, challenges, prospects, Kano metropolis, cloth vendors

INTRODUCTION

It is widely recognized that Small and Medium Enterprises (SMEs) play dynamic role in enabling economic growth, poverty alleviation, employment and wealth creation for equitable distribution of income and increased productivity (Igwe et *al*., 2018). In most countries including developed nations such as Japan, USA, UK etc., SMEs account for more than half of the total share of employment, sales, and contribution to GDP (Ogbo and Nwachukwu, 2012). Productivity in the informal sector of typical African countries ranged from 29 % GDP in South Africa, 60 % in Zimbabwe, 34 % in Kenya, 43 % in Uganda, and 75 % in Nigeria. According to International Labour Organization (2014a), SMEs have the potential to contribute significantly to the social and economic progress of workers and communities. In the developing regions, self-employment which constitutes a greater share of informal employment (non-agricultural) represents nearly one third of total non-agricultural employment in Sub-Saharan Africa. The manufacturing sector in Sub-Saharan Africa is dominated by very small and informal enterprises and majority of them grow only when they are young and because of this lack of growth, the job creation falls short of what they are expected to achieve (Sonobe *et al*., 2011). Business environment in Africa is affected by some institutional barriers such as: ineffective credit and finance system; corruption, political instability and inefficient legal system; lack of quality education; poor infrastructure; religion; tradition and customs (Igwe *et al*., 2018).

Studies have shown that Micro, Small and Medium Enterprises (MSMEs) have the propensity to drive the Nigerian economy where over 17 million MSMEs employed about 31 million Nigerians and also accounted for more than 80 % of all enterprises (Afolabi, 2015). Their contribution to the total industrial employment in the country was estimated at 70 % and total manufacturing put at 10-15 % (Ogbo and Nwachukwu, 2012). Most SMEs in Nigeria die within the first 5 years of existence, a few go into extinction between the 6th and 10th year while only about 5-10 % survive, thrive and grow (Agwu and Emeti, 2014; Aremu and Adeyemi, 2011). Factors responsible for premature death of

SMEs in Nigeria include: insufficient capital, infrastructural inadequacies, lack of proper book keeping, lack of proper records or no records at all, inability to separate business and family or personal finances, inability to distinguish between revenue and profits (Agwu and Emeti, 2014), lack of focus, lack of succession plan, inexperience, and lack of business strategy (Aremu and Adeyemi, 2011).

Since the mid-1980s there has been an increased commitment of government to entrepreneurship development especially after the introduction of Structural Adjustment Program (SAP) in 1986, and the establishment of National Directorate of Employment (NDE), National Open Apprenticeship Scheme (NOAS), the Small and Medium Enterprise Development Association of Nigeria (SMEDAN) (Afolabi, 2015), Nigerian International Development Bank (NIDB), Nigerian Export-Import Bank (NEXIM), Nigerian Bank of Commerce and Industry (NBCI), National Economic Reconstruction Fund (NERFUND) (Ogbo and Nwachukwu, 2012), and Bank of Industries (BI) among others. In classifying SMEs, 3 parameters are generally applied by most countries singly or in combination namely capital investment on plant and machinery, number of workers employed, and volume of production or turnover of business. Within the Nigerian context, roadside artisans, petty traders, pure/bottled water producers, bakers, local fabricators (regarded as micro enterprises) constitute part of SMEs (Aremu and Adeyemi, 2011).

Artisanal indigo dyeing using different plant species has been practiced in Europe, west Africa, central Asia and America (Mcfoy, 2008). Artisans use natural indigo in Japan (Yoshioka, 2010; Aino *et al*., 2018), China (Zhang *et al*., 2016; Li *et al.,* 2019), Korea (Park *et al*., 2012; Shin *et al*., 2019), India (Gilbert and Cooke, 2001; Clark *et al*., 1993) and Mexico (Mcfoy, 2008) among others. Natural indigo dyeing has been an art in many African countries including Egypt (Byrne, 1981), Gambia (June, 2000), Ghana (Abas, 2014; Asmah and Sherifatu, 2016), Sierra Leone (Mcfoy, 2008), Guinea (Ringuede, 2016), Morocco (Alouani*et al*., 2016) and Nigeria (Owoeye, 2014; Ezeanya-Esiobu, 2019) to mention a few. Two important events had disrupted the field of traditional indigo dyeing globally; the production of synthetic indigo in 1880 and the development of sodium dithionite (Vuroma*et al*., 2008). Economic penetration of textile market by China and the wave of terror and insurgencies led by Boko Haram in Nigeria had negative impact on occupational dyeing in West Africa (Ringuede, 2016). Until now, little work has been done to examine the challenges and prospects of the dyeing occupation in Kano metropolis. Previous studies investigated occupational dyers elsewhere (Amubode, 2009; Selase*et al.,* 2019; Asmah and Sherifatu, 2016; Acquah and Oduro, 2012).

Kano metropolis was selected because the ancient city has attracted historical prominence since the 14th Century with its fine indigo dyed cloth (Ezeanya-Esiobu, 2019) and currently there are many secondary dyeing units in the area that are engaged in hand dyeing using synthetic vat dyes. Large population and abundant markets enable huge patronage of the services offered by the dyers. The study will contribute in addressing the fundamental question: what are the challenges and prospects of occupational vat dyeing in Kano metropolis? The study will focus on dyers using synthetic vat dyes and chemicals.

MATERIALS AND METHODS

Study Area

Kano metropolis is the second largest industrial and commercial centre in Nigeria after Lagos and it has experienced rapid population growth rate. Its population is 1.6 million in 2000, 2.3 million as at 2003, 2.8 million in 2006 (Balogun *et al*., 2020), about 3.5 million as at 2014 (Weber *et al*., 2017) and is projected to reach about 5.7 million by 2025 (Abdullahi *et al*., 2019). It is bordered by Madobi and Tofa Local Government Areas to the South West, Gezawa to the East, Dawakin Kudu to the South East, and Minjibir on the North East (Balogun *et al*., 2020). Kano metropolis covers the whole of Dala, Gwale, Fagge, Nassarawa, Kano Municipal, Tarauni and parts of Kumbotso and Ungogo Local Government Areas (Liman, 2015). It lies between Latitude 10^{o} and 12^{o}N and longitude 8^{o} and 9^{o}E, covers an area of 600 km^{2} with an altitude of 488 m above sea level (Suleiman *et al*., 2020).

In pre-colonial time, Kano city exported leather, dyed cloth and plain-woven fabric because the people were astute entrepreneurs who managed workers with skills in tanning, dyeing, weaving, and metal work which is highly developed (Afolabi, 2015). In contemporary northern Nigeria, Kano provides a stable continuous market for both manufactured and semi-processed goods. There are many privately owned SMEs in the metropolitan area producing textile, tanned leather, foot wears, plastics, cosmetics, foods and

beverages etc. located in Bompai, Sharada (phase I, II and III), Challawa or Tokarawa industrial estates (Tanko and Idris, 2013).

Indigo dyepits are located at various locations in Kano Metropolis namely the ones in Kofar Mata which is the most organized and dyepits in *Zage, Dala, KarofinGangamau* (Barau, 2007), *Kankarofi, KarofinSudawa, and KarofinKwalwa dye pits* which are out of business. Before its decline, indigo dyeing also flourished at Rano and Kura towns in the southern and central Kano respectively. Kofar Mata, located in the ancient city of Kano and renowned for traditional indigo dyeing, has been discovered and documented by the famous Moroccan Traveller ibn Batuta in the 14th Century even though it was not officially opened until in 1498. It is a landmark for some of the country's earliest export which played a significant role in the economic growth of Kano (Jakobsen, 2016). According to Flynn (2007), on a good day, one of the 60 dyers working at Kofar Mata could earn ₦2000 ($5.17) for dyeing 5 garments. It is still open for trade although most of the pits are filled with waste and out of use.Thus,the dyers had to follow the modern trend of dyeing with synthetic dyes and chemicals. "KantinKwari", a 2nd generation international market established in 1934 (Ibrahim, 2015), provides a significant demand for the locally dyed materials. For the purpose of this study, the respondents are called "dyers", non-industrial dyeing units are referred to as dyehouses, and traders in 'Kantin-Kwari' cloth market are called cloth vendors.

Data Collection and Analysis

The research relied on primary data gathered through a structured questionnaire and focus group discussions. A structured questionnaire was developed according to standard protocol for questionnaire design and testing (Geer *et al.,* 2006) and questions were developed as a result of insight from Johnson (1999). The validity of the coverage of questions included in the questionnaire (content validity) was gained through experts in the field, colleagues as well as members of the target population. Reconnaissance visits were made in June, 2020 to locate the dyers and cloth vendors. The developed questionnaire was pretested in a pilot study among the dyers that did not participate in the study and during the reconnaissance visits. Variability in dyers response and the understanding of question content (face validity) was evaluated and this information was used to produce a revised final version of the questionnaire, specifically questions were added where content coverage was lacking and questions were rephrased where understanding was vague. The questionnaire was prepared in English but was communicated to the dyers in their local dialect (Hausa).

This part of the series covered 12 questions in 1 section which dealt with the challenges and prospects of the dyeing occupation (e.g. challenges faced by the dyeing enterprises, period that the occupation was more lucrative, quantity of material that can be dyed in the past and at present time, what government can do to revive the dyeing occupation etc.). The research population is the total number of occupational dyers in Kano metropolis where participating dyers were chosen as a purposive sample. A total of 1387 questionnaires were administered in 20 dyeing units (geographical locations of the dyehouses are shown in part 1 of the series) where willingness to participate in the study was confirmed through completed consent form. Dyers who are at least 18 years of age and had worked for at least 5 years in the dyehouses were eligible to participate in the study. Data was collected from August to December, 2020, with the dyers working, through self-completed questionnaire by the researcher and 2 enumerators over a duration of 25-30 minutes with each dyer being asked the same question in the same order. A monetary incentive of ₦3000 ($7.75) was provided for participation due to initial reluctance to participate because according to the dyers, the Chinese used similar approach to learn their techniques. Before initial data screening all the completed questionnaires were coded and entered in Excel software after which the data were analysed by descriptive statistics (frequency) using SPPS version 26.

Additional information was obtained from focus group discussion with the researcher, assistant researcher and 7 dyers, 1 from a dyehouse in each of the 7local government areas (Nassarawa was not represented) and with 5 cloth vendors separately in December, 2020 at Senior Secondary School Rumfa College, Kano and KantinKwari cloth market respectively. The focus groups were selected by purposive sampling technique. Two key informants were used in the study. Aliyu Umar, a wholesale colour vendor, whose nature of business permits him to know the major dyers in Kano metropolis as well as cloth vendors in the market, and Mallam Haruna Baffa who has valuable information being the Secretary of "Kofar Mata" dyers Association coupled with his exposure having attended numerous

exhibitions of Africa by Design namely Ghana (2016 and 2019), Dubai (2017), London (2018), United States (2019) and Abuja (2020).

Focus group discussion with the dyers centred on a short list of 3 open-ended questions namely the challenges of the occupation, how the business declined, and prospect of the dyeing job while discussion with the cloth vendors centred on 2 open ended questions including how the dyers are paid for their services and customers' preference to imported and locally dyed materials. Focus group discussions were audiotape-recorded so that reference could be made to the remarks of the participants in order to ascertain common themes. Discussion with the dyers lasted for 2 hours while that with cloth vendors lasted for 1 hour. Discussion was recorded using paper and pencil. Dollar exchange rate has fluctuated considerably between 2020 till date. (exchange rate of ₦386.96 per US$ as at 30th August, 2020 was used where dollar equivalent is given in the text).

RESULTS AND DISCUSSION

Challenges of the Dyeing Occupation

As shown in Figure 1, the dyeing occupation is threatened by numerous challenges among which the major ones in order of proportion are limited capital, high cost of production, low patronage, competition with foreign dyed cloth, and insecurity. Other challenge, which is of high proportion is credit owed by cloth vendors. Training problems, occupational hazard, variability in cost of services, and decline in local fabric production appear to be relatively less significant.

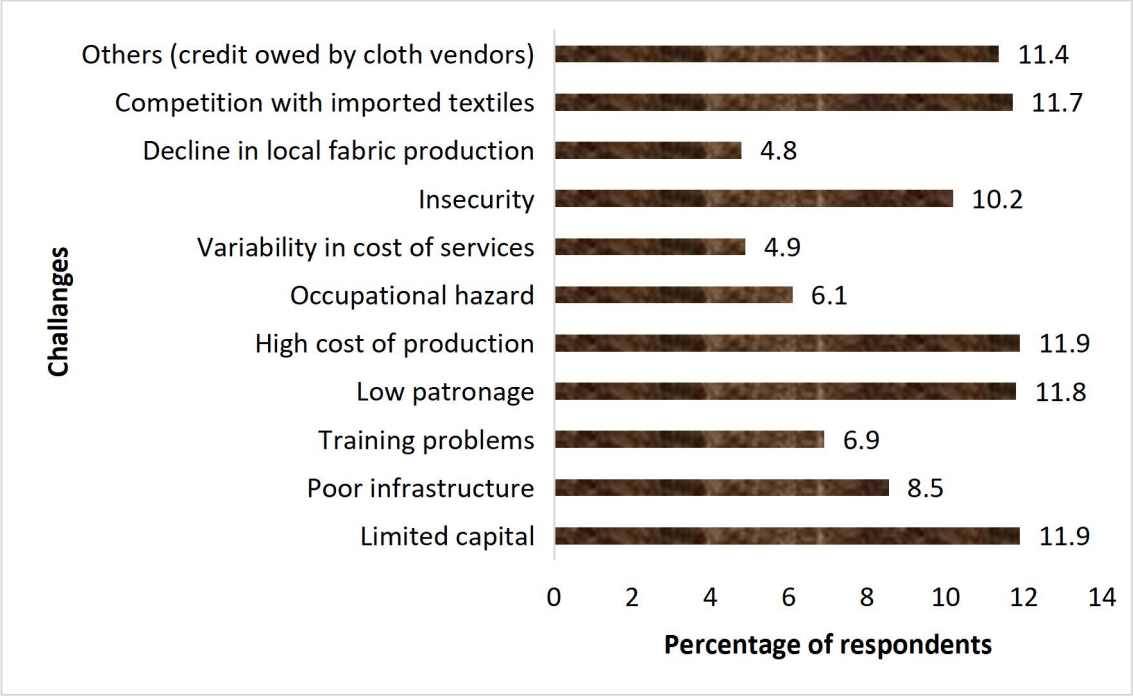

Figure 1: Challenges of the dyeing enterprises

Limited of capital

Limited capital is amajor challenge confronting the dyers even though the venture requires low capital investment as reported in part 2 of the series. Similarly, Selase et al (2019) reported that lack of capital is the major reason for the decline of batik and tie-dye centres in Ghana. Also, according to Agwu and Emeti (2014), poor financing constitutes a big problem in the performance of majority of SMEs in Nigeria. The dyers revealed that they need money to be able to complete the work collected from cloth vendors since in most cases the advance payment received is not sufficient. They also wish toown stalls along the streets of "KantinKwari" cloth market for selling dyed materials which is capital intensive. According to them, they do not have access to credit due to lack of collateral neither do they get financial support from Government or any other organization. We reported in part 1 of this series that the dyeing enterprises were informal and do not enjoy secure property rights which deprives them of access to both capital and credit.

High cost of production

High cost of production is also a major challenge to the dyeing occupation. We reported in part 2 of the series that vast majority of the dyes and chemicals used are imported from China where their costs have increased about 5 times from 2015 to date and that most of the dyers purchase 25 L of borehole water at ₦30($0.077) and tap water at ₦50($0.129)from vendors. This will invariably add to the cost of dyeing considerably due to high water consumption. The dyers revealed that cost of dyes and chemicals, water, fuel, calendering and stipend paid as labour make it very difficult for them to break even especially due to the fact that there is very little increase in cost of services. Similarly, according to Afolabi (2015) and Ogbo and Nwachukwu (2012), over dependence on imported raw-materials is a problem to SMEs. High cost of production was also found to be a challenge to batik and tie-dye centres in Ghana (Selase *et al.,* 2019).

Low patronage

The dyers disclosed that majority of customers coming from Niger, Chad and Cameroun were lost due to Boko Haram insurgency and also poor economy has resulted in many customers not being able to afford their services. According to them, presently, many people change their mode of dressing to western style contrary to mostly using 'Caftan', 'Bubu', 'Buba' etc. in the past (see part 2 of the series). Similarly, change in fashion trend where people see anything western as modern is one of the reasons for the decline in indigo dyeing in Africa (Mayusoh, 2015) and nowadays, most Nigerians have developed a high propensity for the consumption of foreign goods as against their locally made substitutes (Agwu and Emeti, 2014). Similarly, locally dyed fabrics that used to be the toast of many people in Ghana now appeared to have gone out of fashion as the popularity of western clothes has grown over the years (Selase*et al.,* 2019). Decline in local dyeing in Ghana was also attributed to low patronage (Asmah and Sherifatu, 2016; Selase *et al.,* 2019).Cloth vendors disclosed that their customers prefer locally dyed materials as it takes longer time to fade. According to them, the customers are sometimes compelled to buy imported dyed materials due to availability of designs which may not be found locally. This is attributable to Chinese competitive advantage discussed in part 2 of the series.

Competition with imported textiles

We reported in part 2 of the series that at the peak of the dyeing business in 2015, the Chinese started bringing similar dyed cloth to 'Kantin-Kwari' which are sold at the outskirt of the market and that on the 14thof May, 2015, thousands of local fabric dyers staged a demonstration against the importation of Chinese textiles and engagement of the expatriates in retail sale of dyed fabrics in the Kano market. This also appears to be the case in Egypt where an influx of Chinese goods has swamped local production, and in Zambia and Zimbabwe where there has been riots against Chinese merchants and products (Eisenman, 2012).This is also in line with the findings of Ringuede (2016) that Chinese manufacture synthetic textiles reproducing a variety of traditional designs and keeping the counterfeit for sale in the region where they are usually produced, directly competing with the local cloth dyers. Nigeria was China's 2nd largest trading partner in Africa, after South Africa, and importation of manufactured textiles from China have undermined both hand and mechanized textile production in the country which endangers the self-sufficiency of the people (Eneji*et al.,* 2012). Similarly, influx of Chinese textiles threatened local textile dyeing industries in Abeokuta, Nigeria, making it difficult for the industry to compete favourably in the local market (Amubode, 2009).

Credit owed by cloth vendors

We reported in part 1 of the series that the dyeing occupation employ many youths with different job specifications including marketing which involves getting job from the market and also reported in part 2 that cloth vendors are next to customers from the neighbourhood in terms of patronage. The dyers and cloth vendors disclosed that the latter pay only 40-50 % of the charges as advance payment to the former and due to increasing cost of raw-materials, calendering etc. the money is usually inadequate for the dyers to complete the job and have to owe for either dyes and chemicals or calendering or payment of jobbers. According to the dyers, cloth vendors, in most cases, feel reluctant to pay the balance when the job is completed where some them offer clothes equivalent to the money they owed. This default in payment will naturally affect business relationship between the dyers, jobbers, colour vendors etc. which may cripple the dyeing venture. Similarly, default in payment by clients has been reported as a challenge to Ntonso local dyers in Ghana (Acquah and Oduro, 2012).

Insecurity

We reported in part 2 of the series that some of the dyers have customers from other states in Nigeria and from neighbouring African countries

namely Niger, Chad and Cameroun. The dyers disclosed that insecurity threatens the dyeing occupation because the number of foreign customers buying the dyed materials in the market has drastically reduced thus the demand for their services has declined. According to them, Ethnoreligious violence and Boko Haram insurgency are the causes of the problem. It is known that there have been many outbreaks of bloody violence between communities since the return of democracy in 1999 such as the riots in the urban centres of Kaduna and Kano(Walker, 2012). Boko Haram is a Hausa language nickname given by outsiders meaning "western education is forbidden by Islam". The jihadi group pledged allegiance to the Islamic State in March, 2015 and has killed many people in Nigeria, Niger, Chad and Cameroun (Thurston, 2016) resulting in the loss of significant number of trading partners in the dyeing business. Currently, banditry is also a mitigating factor in the dyeing venture.

Poor infrastructure

The dyers revealed that their infrastructural challenge includes wastewater disposal problem due to lack of proper drainage, lack of water, and inadequate space for the dyeing job. We reported in part 2 of this series that the dyers work in the neighbourhood of residential houses and that water is mostly purchased from vendors. Some of the dye houses do not have drainage at all while the available drainages are usually shallow and stagnate wastewater. Similarly, a local newspaper reported that residents of Kano metropolis lamented on lack of drainage on the streets of the city (Murtala, 2018). Informal enterprises have limited or no access to public infrastructure and infrastructural inadequacies such as water etc. are serious problems to SMEs (Agwu and Emeti, 2014).

Training problems

The dyers disclosed that in the past, politicians have organized several training sessions involving various entrepreneurial skills (including dyeing) among selected individuals as a reward for loyalty. According to them, the training usually last for few days after which money is shared as capital to set up business related to the skill acquired. It was also revealed that none of the beneficiaries has ever opened a dyeing venture and that no occupational dyer has ever been recruited. In contrast, government and non-governmental organizations have trained and continue to train people in the making of batik and tie-dye in Ghana in an attempt to create employment and alleviate poverty (Selase *et al.,* 2019). We reported in part 3 of this series that the dyers lack technical chemistry background and will therefore require training to improve on the technical know-how of vat dyeing processes. Similarly, lack of technical know-how and training were reported as challenges facing Daboya local dyeing industry in Ghana (Asmah and Sherifatu, 2016).

Occupational hazard

Hazard due to dye and chemicals is of great concern in dyeing industries hence several safety measures including the use of personal protective equipment are put in place. The dyers revealed that occupational hazard is not a serious problem to them because they tend to become resistant to inhalation of chemicals and believe that eating meat and drinking milk immediately after the dyeing process suppresses the effects. According to them, some have suffered work related symptoms as well as chemical burns due to spills and splashes. Typically vat dyes have carcinogenic health effects (Asgher *et al.,* 2008) and certain vat, reactive and disperse dyes are recognized as skin sensitizers. Most of the dyers use protective hand glove, protective boots, and polyethene skirt but rarely use nose guard/face mask. It has been reported that annually, occupational accidents and work-related diseases caused over 2.3 million fatalities, out of which over 350,000 are caused by occupational accidents and close to 2 million by work related diseases

Variability in cost of services

The dyers reported that, nowadays, it is typical of youths to start working as apprentice and suddenly decide to start their own business without completing the training. They disclosed that their apprentices just stay for a few weeks learning the job and running errands either to buy chemicals, collect materials from or deliver finished goods to cloth vendors. Such apprentices quit the job that is supposed to last for at least 3 years and open their own dyehouse competing directly with the local market and delivering poor quality services. The cloth vendors use this opportunity to reduce cost of dyeing in their favour and this ultimately brings about variation in cost of services which affects the profit that could be made after a good quality job. For this reason, an experienced dyer may have no choice but to accept a meagre amount and reduce the dyeing quality.

Decline in local fabric production

The dyers revealed that due to limited number of textile manufacturing companies hence limited availability of locally produced fabric, currently, both availability and cost of white undyed fabric is determined by the Chinese. Similarly, according to Renne (2015), by 2012, most of the textiles sold in "Kantin Kwari", are imported from China. Formally, Nigerian textile industry was the 3rd largest in Africa after Egypt and South Africa and was the largest employer of labour in the manufacturing sector where it accounted for about 25 % of total manufacturing employment (Eneji *et al*., 2012). At present, there is serious decline in local fabric production which gave the Chinese a competitive advantage. For example, in a typical textile industry studied, production figures per meter from a weaving department has shown that about 9.6 million meters were produced in 2000 which fell to about two third and then one third in 2009 and 2013 respectively (Muhammad *et al.,* 2017) and since then the figures continue to decline.

Prospects of the Dyeing Enterprises

Occupational vat dyeing before 2015

The dyers almost entirely believed that the dyeing occupation has declined with majority of the opinion that it was more profitable over 5 years ago i.e. before the 3rd quarter of 2015 (Figure 2). The result shows that during the period that the business was more lucrative, most of the dyers can process over 20000 yards (>21872.26 m) weekly as shown in Figure 3. Among the reasons why the business excelled in the past, better economy was found to be of greater importance followed by little or no competition with imported dyed materials as can be seen in Figure 4.

Occupational vat dyeing as at 2020

Vast majority of the dyers are of the opinion that the dyeing occupation is no longer thriving. Figure 5 shows that only 3.7 % of the dyers can dye up to 1601-2000 yards of material (1463.95-1828.8 m) in a week at present time while the majority can only dye not more than 400 yards (not >365.76 m). This indicated that the quantity of material that can be dyed weekly has declined significantly. This collaborate well with the fact that most SMEs in Nigeria die within the first 5 years of existence and only about 5-10 % survive, thrive and grow (Agwu and Emeti, 2014; Aremu and Adeyemi, 2011). Among the reasons given for the decline in dyeing rate, the dyers consider poor economy, competition with imported dyed materials, and increasing cost of inputs/raw materials to be more important as shown in Figure 6. This is in line with the major challenges mentioned previously.

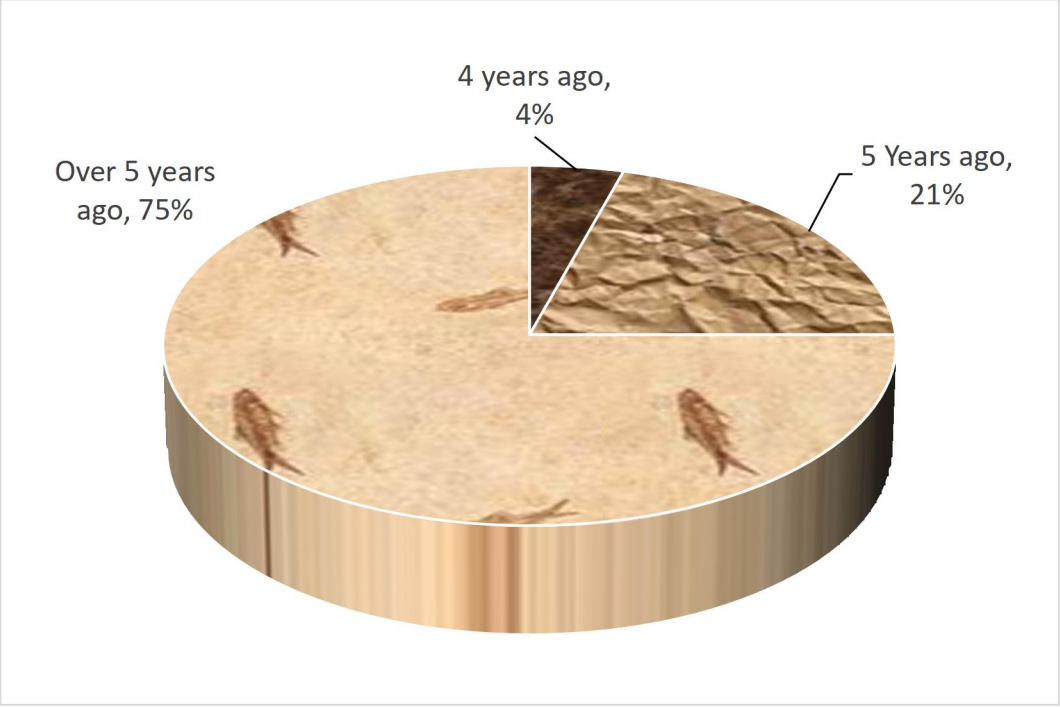

Figure 2: Period that the dyeing occupation flourished

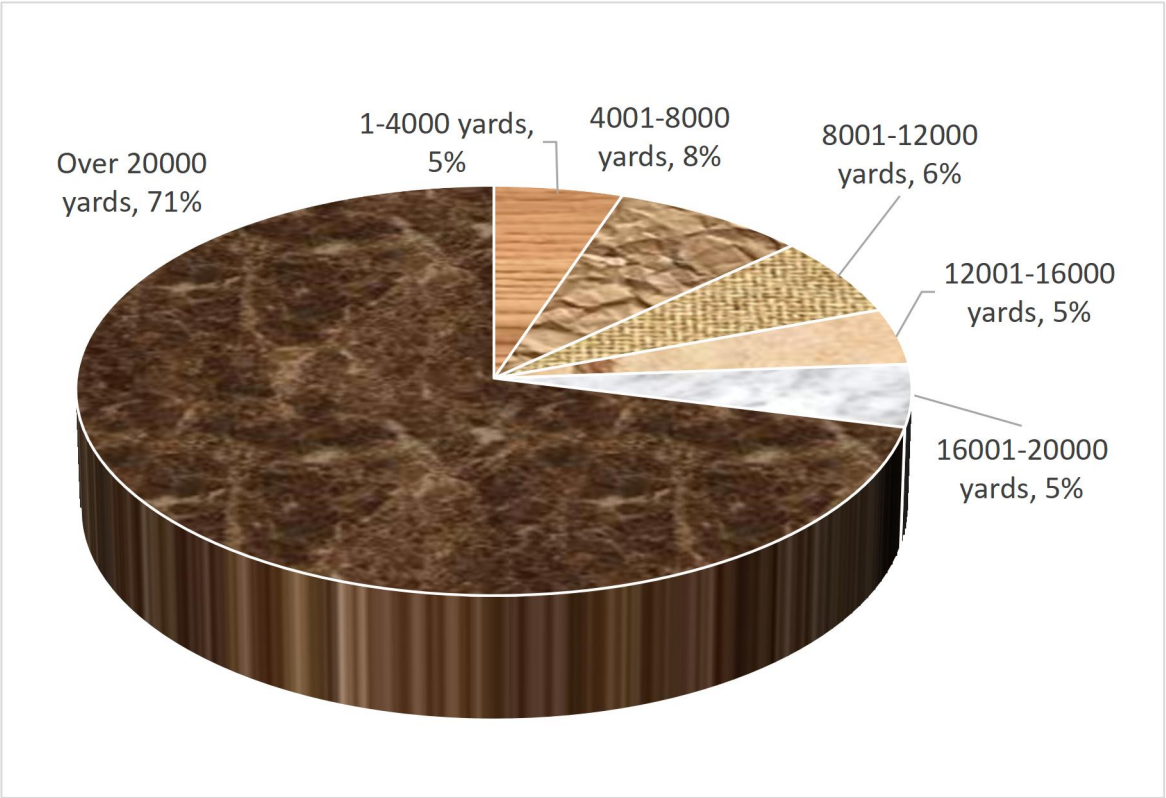

Figure 3: Weekly dyeing rate before 2015

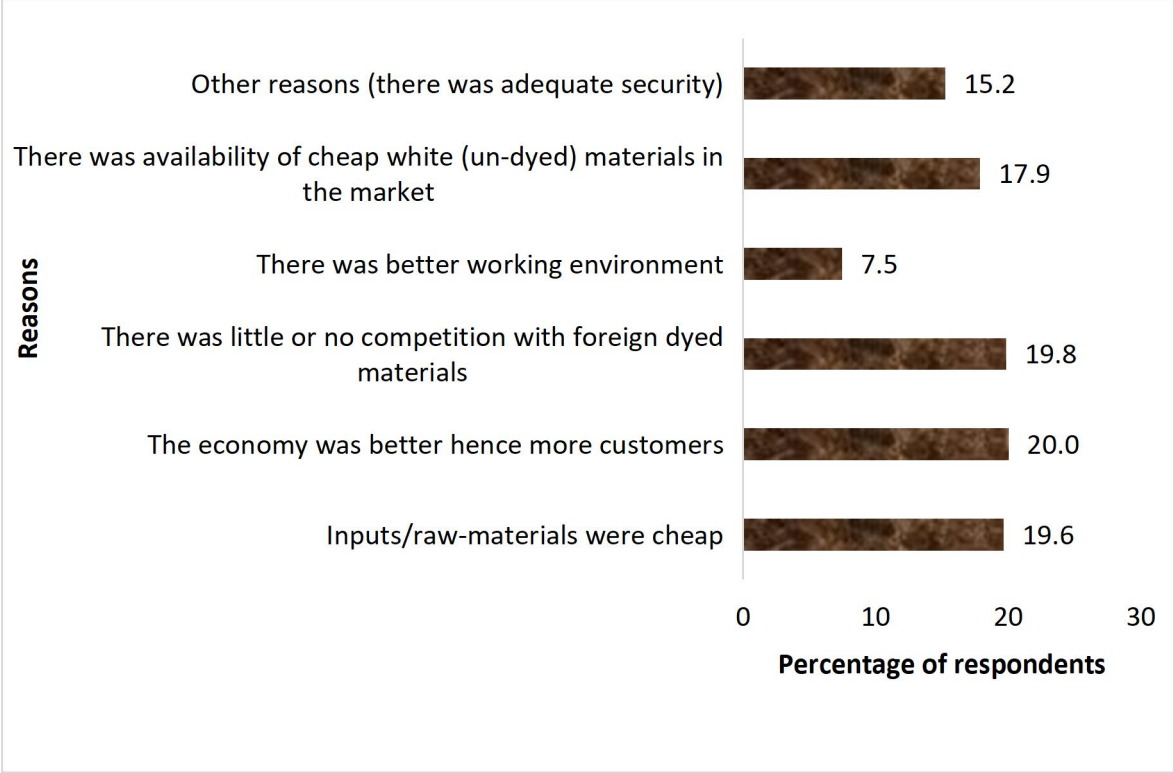

Figure 4: Reasons why the dyeing occupation blossom in the past

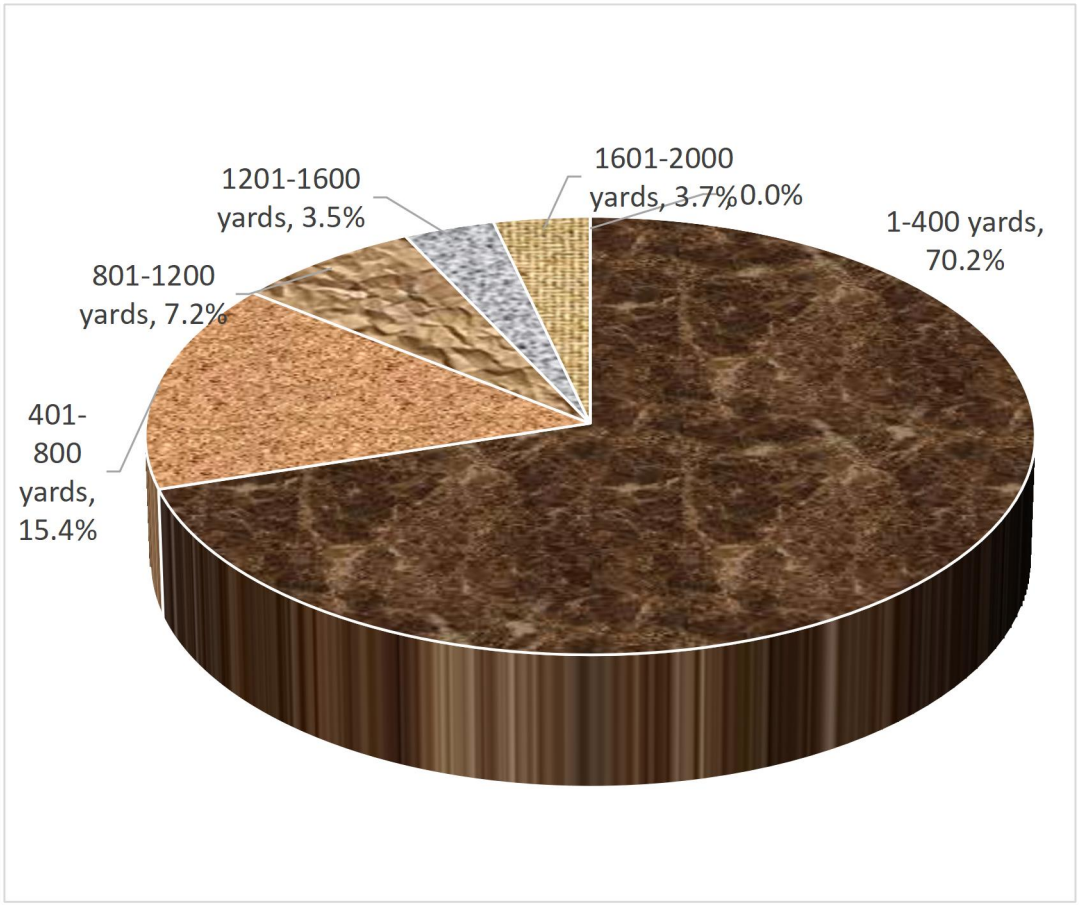

Figure 5: Weekly dyeing rate as at 2020

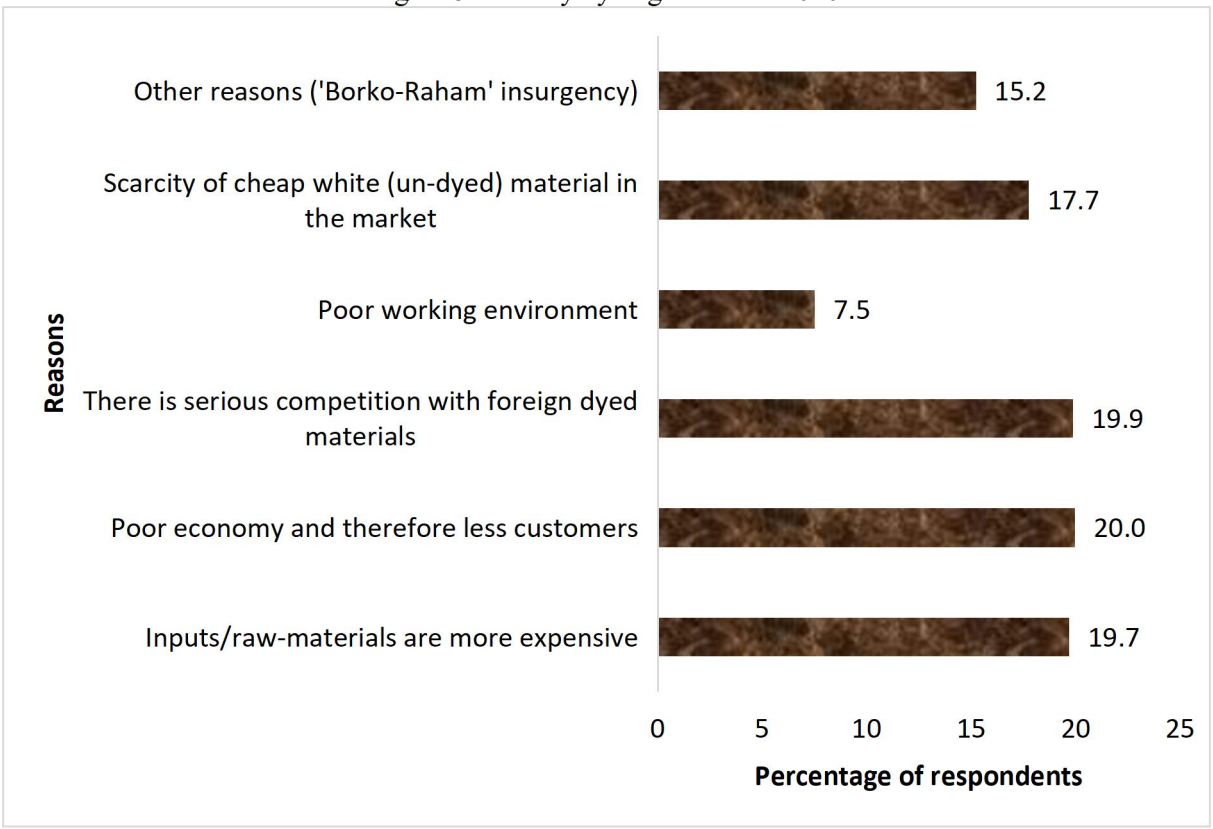

Figure 6: Reasons why the dyeing occupation declined

The role of Government

A larger proportion of the dyers believed that Government can help revive the dyeing occupation.The major support required by the dyers are for the Government toimprove the economy, stop importation of coloured textiles, revive textile industries, and construct dyeing units in the industrial areas of Kano metropolis as shown in Figure 7. The dyers constantly look for competitive advantage in order to sustain the venture. One such move is the modification of their dyeing methods e.g. "shadow" effect which is quite appealing thus attracting customers (see part 3 of the series).

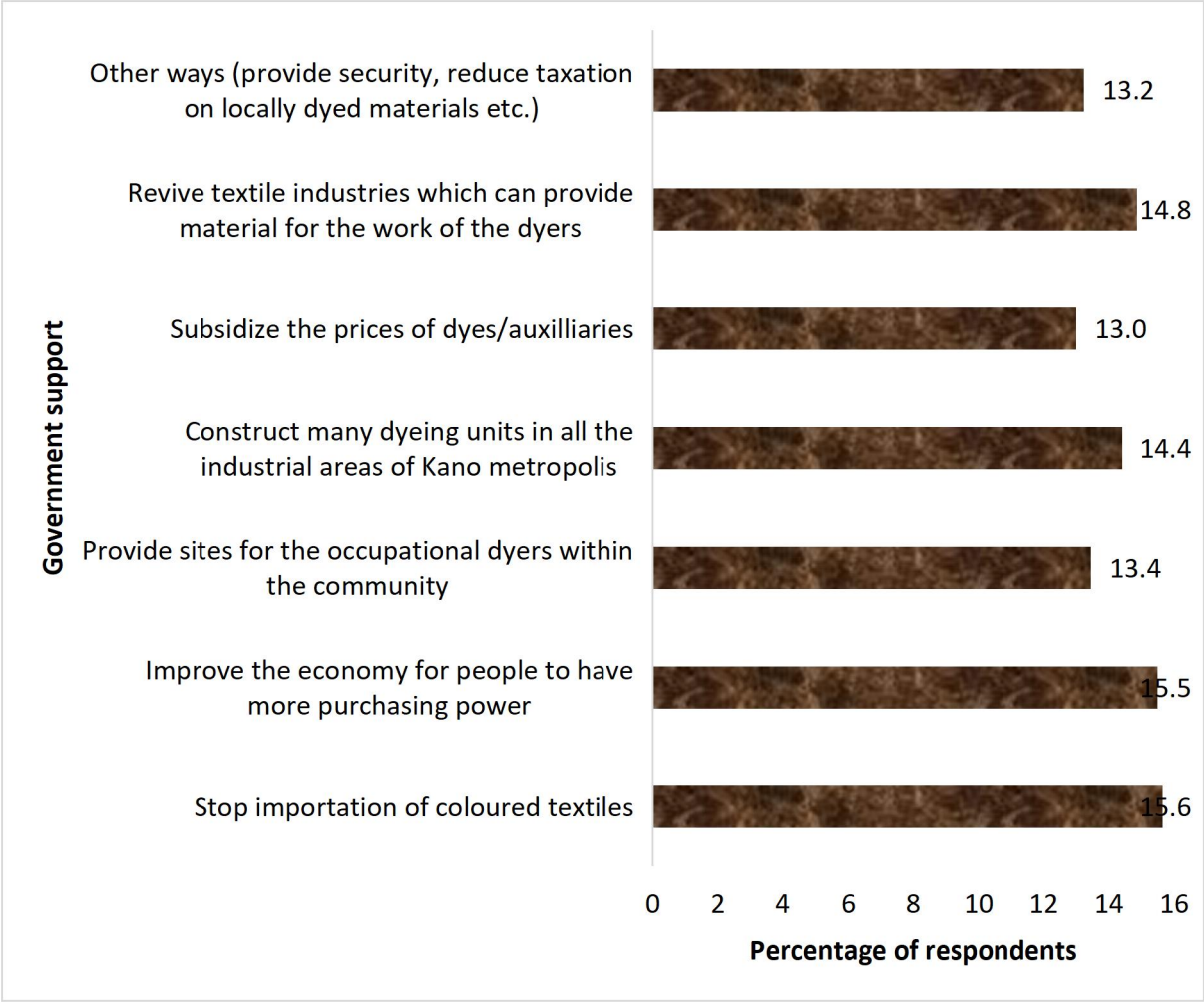

Figure 7: Government support for the revival of the dyeing occupation

Occupational vat dyeing in years to come

To speculate the future prospect of the dyeing occupation, there is need to know the reasons for the decline of traditional indigo dyeing. Vuroma (2008) has attributed the disruption of traditional indigo dyeing globally to the production of synthetic indigo and development of hydros as reducing agent enabling the dyeing process to be relatively short unlike the traditional processes.Additionally, indigo dyeing in West Africa was affected by economic penetration of local market by China (Ringuede, 2016).In the case of Nigeria, insecurity is also a very important factor where presently, only about 10 out of 144 dye pits of "Kofar Mata" are still functional. Based on the challenges identified in this study, the modern vat dyers may have the same fate as the traditional indigo dyers and results show that when this happens, thousands of youths will be out of the business of dyeing, calendering, and colour vending, dyed materials will become more expensive, and there will be more drug addicts and hoodlums in the society as shown in Figure 8.

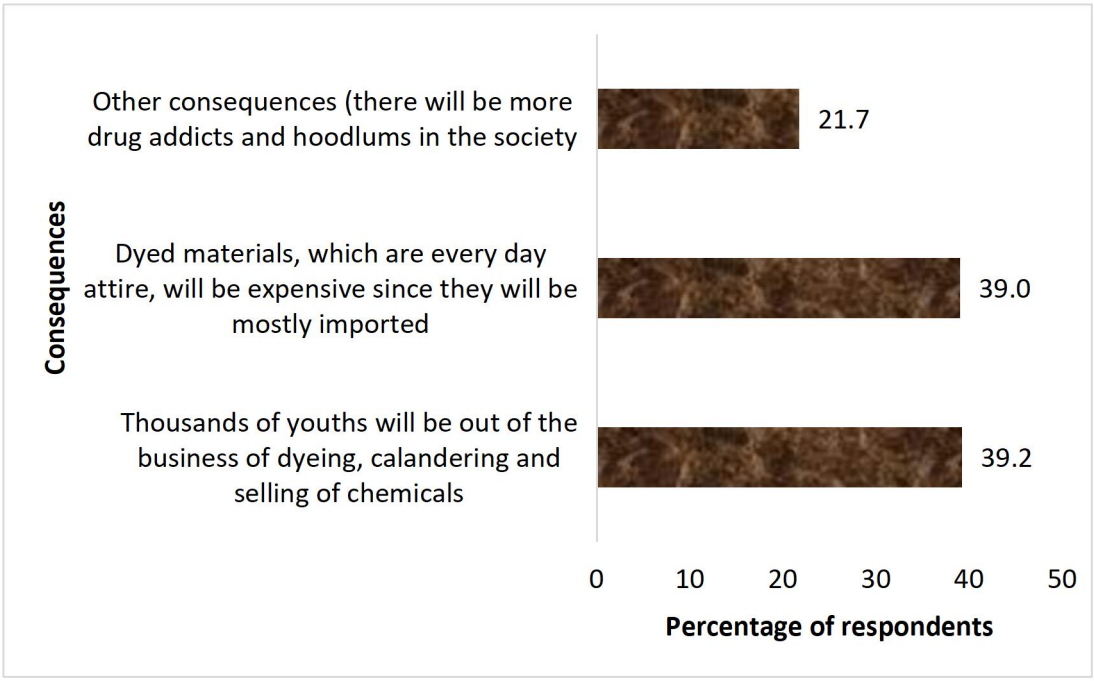

Figure 8: Consequences of the decline of the dyeing occupation

CONCLUSION

The result showed that among the challenges faced by the dyers, lack of capital, high cost of production, low patronage and competition with imported textiles were more prevalent. It was gathered that designs appealing to customers are scarce and costly when available and therefore the dyers have competitive disadvantage due to decline in local fabric production leading to overdependence on imported fabrics. Insecurity and lack of improvement on the dyeing processes can hinder the sustenance of the occupation. Majority of the dyers indicated that the dyeing occupation has flourished until it started declining in 2015due to the Country's deteriorating economy (reducing people's purchasing power) and serious competition with Chinese textiles. Most of the dyers can dye over 20000 yards (> 18288 m) of fabric weekly before 2015 but the quantity has reduced to not more than 400 yards (not >365.76 m) at present time. The dyers need government support to revive the dyeing venture especially by improving the economy, providing security, and banning importation of coloured textiles which will otherwise subject them to the same fate as traditional indigo dyers.

The study suggests creating intervention strategies that can be implemented to sustain the dyeing occupation such as reviving textile industries thereby enabling local fabric production of fabrics and subsidizing the cost of dye and chemicals to reduce cost of production for the dyers to compete favourably. The government should tackle Boko-Haram insurgency and banditry (ongoing) for customers coming from neighbouring African countries to return. Importation of coloured textiles should be stopped and entrepreneurship studies should be introduced into the Nigerian educational system to acquire innovations in dyeing and management skills. Furthermore, the dyers should be encouraged to become formal to be able to get capital through loans.

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