

# PORTERAGE OPERATION IN RURAL MARKETS - A PIVOTAL LINK AND TRANSFORMATION IN AGRICULTURAL COMMODITIES TRANSPORTATION SYSTEM: CASE OF SOUTH-WESTERN NIGERIA

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## ABSTRACT

Due to poor infrastructure, unmotorable and heavily congested many urban and rural market spaces in most African societies, Nigeria inclusive, and consequent use of head porters in transporting market goods and wares, this paper seeks to explore porterage operation in rural markets with a view to establishing the pivotal linkage between porterage, market and agricultural commodities transportation system in south-western Nigeria. Specifically, the porterage, market and transportation linkage were conceptualized; socio-economic statuses of the porterage workers were profiled; types of agriculturally based porterage activities and porterage workers' levels of involvement identified; reasons motivating and constraints limiting their involvement; and transformation in porterage operation in agricultural commodities transportation were discussed. Pre-tested and validated interview schedule was used to elicit information from 190 porterage workers randomly selected from across 10 agricultural commodity markets in the study area. Key informant interview was used to elicit qualitative information from their association leaders. Also, on-site photographs were captured to reinforced transformational innovation in rural porterage. Data collected were processed using statistical package for social sciences (SPSS) version 21. The paper established porterage as a sub-system in rural market transportation system. It also revealed that majority of porterage workers are young people (about 70%) under 40 years of age with a very low socio-economic status with no or little education. They earn an average income of ₦264,505.26 (\$734.74) annually. They operate on an average of 6 days/week and about 21/2hrs/day without requiring any special skills and initial capital. They are mostly exposed to harsh weather condition and diverse physical risks. It noted the current transformational innovation the sub-system is undergoing with gradual migration from head carriage to wheelbarrow (34%), advancement into cart pushing (16%) and very few motorized tricycles. This is observed to be a strategic way of reducing stress and energy involve in the traditional porterage operation without losing the purpose of connecting the rural transportation system.

**Keywords:** Porterage, market, transportation, linkage, transformation, agriculture, Nigeria

## 1. INTRODUCTION

The informal economy has remained a major part of sub-Saharan African economic systems (Akanle and Chioma, 2013). Crucial to this are market place transactions where people meet to purchase and sell different items. As a result of the socio-cultural, geographic and economic infrastructures of many traditional African societies, goods to be sold and purchased are transported from one location to another for various purposes. Owing to high

level of under-development, majority of the urban and rural market spaces in most African societies are usually unmotorable and heavily congested, thus the head porters, popularly called alabaru among the Yoruba ethnic group prevalent in South-western Nigeria, are needed to transport market goods and wares. They are a major part of the transport systems and structures of developing countries with poor transport and market planning.

In south-western Nigeria, professional load porters whose ages may range from 10 to 70 years and above are commonly seen in the markets where they assist shoppers to carry their groceries of varying weights over varying distances for paltry economic reward (Babatunde, Regina and Adesola, 2014). Head porter is one that carries goods or burdens for someone else, charging for the service. In typical Nigerian markets, they provide a link among the wholesalers, retailers, transporters and the end users. In some cases, they also help the farmers to move some of their harvests from the farm to neighboring markets. These head porters help their patrons who are mostly shoppers and shop owners carry agricultural commodities purchased and, in some occasion, follow them from stall to stall, as they struggle to find their way in poorly laid out and often congested local markets.

As a result of globalization and rapid demographic changes, there has been an increasing demand for agri-food products. Many farmers and breeders in sub-Saharan Africa face significant difficulty when trying to bring their products to the market (Anne and Patrick, 2009). The agri-food supply chain is comprised of a set of sequential operations namely input supply, production, postharvest, storage, processing, marketing distribution, food services and consumption following a sequence of operations from 'farm-to-the-fork' (van der Vorst, 2006; Matopoulos et al., 2007; Jaffee, Siegel and Andrews, 2010). The development of smallholder agriculture in developing countries is extremely sensitive to transport strategies. Many isolated farmers have little opportunity to escape poverty, as their potential marketing activities are hampered by inadequate or poor transport facilities.

Past studies such as Yeboah and Yeboah (2009) investigated the cultural and socio-economic profiles of porters in Accra, Ghana; Akanle and Chioma (2013) carried out an anthropological study of head portage in Ibadan; Kwankye et al. (2007) reveal head portage as one of the coping strategies of independent child migrants from northern Ghana to southern Cities; Osotimehin et al. (2007) evaluated youths' participation in portage services in Ogbomoso, Oyo State, Nigeria; while Babatunde et al. (2014) also studied spinal deformities among professional load porters in a Nigerian urban market. However, there is dearth of information on the socio-economic profiles and involvement of portage workers in agricultural related activities in commodity markets vis-à-vis transformational innovation the portage system is currently undergoing.

It is against this background that this paper seeks to explore portage operation in rural markets with a view to establishing the pivotal linkage between portage, market and agricultural commodities transportation system in southwestern Nigeria. Specifically, the portage, market and transportation linkage was conceptualized; socio-economic statuses of the portage workers were profiled; types of agricultural based portage activities and portage workers' levels of involvement identified; reasons motivating and constraints limiting their involvement; and transformational innovation in portage operation in agricultural commodities transportation were discussed.

## **2. PORTERAGE, MARKET AND TRANSPORTATION LINKAGE: CONCEPTUAL UNDERPINNINGS**

A porter, also called a bearer, is a person who shifts objects for others. The word was derived from the Latin portare which means to carry, (The Concise Oxford Dictionary of English Etymology, 2003). Different kinds of portage activities exist and critical to this are the head porters who operate in sub-Saharan African markets. According to Kwankye et al. (2007), the phenomenon of carrying loads on the head for commercial purposes was first

introduced in Ghana by male migrants from Mali in the 1960s. During the period, it was virtually a male dominated activity, but in the subsequent years, different people of both genders are now involved in the trade. Women, nowadays, also form a significant proportion of head porters in contemporary Africa's rural and urban markets. In the work of Akanle and Chioma (2013), it was reported that head portage for commercial purposes was first introduced to Nigeria by male migrants from the northern part of the country and other parts of Africa and over the years, there has been an emergence of the physically demanding occupation of commercial load carrying. The occupation is engaged in by male and female of varying age groups as a way of surviving the downturns in the economy.

Agricultural marketing covers the services involved in moving an agricultural product from the farm to the consumers. To achieve this, there are numerous interconnected activities involved such as planning production, growing and harvesting, grading, packing, transport, storage, agro and food processing, distribution, advertising and sale. The role of transport and logistics is very crucial as production process is not complete until the commodity is in the hands of the final consumers. Availability of transport facilities is a critical investment factor that stimulates economic growth through increased accessibility of goods and services (Ajiboye, 1994). The peculiarity of most agricultural commodity markets in Nigeria in terms of congestion and poor layout necessitate portage workers forming an integral part of the logistics and transportation link in these markets as they help farmers, market sellers and consumers move their agricultural produce from one point to another within or outside the market. In addition, high level of unemployment, especially of women, in Nigeria, has made head portage to become and remain an important leeway.

Transport is regarded as an important factor involved in agricultural development all over the world. It is the only means by which farm produce at farm site is moved to different homes as well as markets (Tunde and Adeniyi, 2012). Transport creates market for agricultural produce, enhances interaction among geographical and economic regions and opens up new areas to economic focus. The special characteristics of agricultural products such as perishability, seasonality and bulkiness depend on a flexible transportation system. Aderamo and Mudashiru (2014) opined that efficient transport system is critically important to agricultural marketing. They assert that if transport services are infrequent, of poor quality or expensive, farmers will be at a disadvantage when they attempt to sell their crops. An expensive service will naturally lead to low farm gate prices (i.e., the net price the farmer receives from selling his produce).

According to Agarwal *et al.* (1997), transport responsibilities that were supposed to be performed by technology are often performed by humans in developing economies, since necessary technologies may not exist, or the socio-cultural or economic situation may not support them. Portage activity is one of the means through which women pursue economic prosperity. Porters are faced with several challenges on their job which includes not being adequately paid for services rendered, health needs among many others. Some of the patrons of these portage workers often exploit and harass them; they are also often subjected to ridicule and insults from family members and those who act as chaperons for them (Beauchemin, 1999; Opere, 2003).

The major risks the head porters are exposed to are health risks (body pain, head ache, back ache, etc.), the mistaken perception that they are worthless people, road accidents, on-the-job personal injuries and responsibility for product damage (Akanle and Chioma, 2013). They sometimes fall with the heavy load they carry as they try to meander their way through the heavy human and vehicular traffic. This sometimes results in fatalities or body injuries that take months to heal. Further evidences revealed that acute injury, such as metatarsal (foot) stress fractures, especially on rough terrain (Charteris, 2000), and acute injuries to the arm (e.g., Colles fractures of the wrist) and leg bones (e.g., ankle injuries) as a result of falls may impose an extra health burden on head porters. Kwamusi (2002) identifies fatigue and slippery paths in the wet season as common causes of falls among head porters, resulting in

widespread knee and toe injuries. Serious falls during head-loading can have both severe musculoskeletal and physiological repercussions (Porter et al., 2013). The portage workers are sometimes knocked down by fast-moving vehicles as they try to cross the road at sometimes dangerous points. In most instances, the consequences of such risks are borne solely by the head porters even when sometimes it is not their fault. There are no systems to prevent them from such exposure or mechanisms to help them bear the consequences. However, they have evolved coping mechanisms over the years. Such coping mechanisms include resignation to faith, esprit de corps among the head porters and the optimism that things will get better over time (Akanle and Chioma, 2013).

### 3. METHODOLOGY

This study was carried out in the agricultural commodity markets in south-western Nigeria, a region where agriculture is the main occupation of the people, with an estimated population of about 32.5 million predominantly of the Yoruba ethnic group who made up approximately 21% of the national population. The population of the study comprised of portage workers in agricultural commodity markets. Based on the availability of portage workers, purposive sampling technique was used to select a total of 10 agricultural commodity markets, from each of which 19 portage workers were selected making a total of 190 respondents. Primary data was collected from the respondents, using both quantitative and qualitative data collection methods. Structured interview schedule was used to obtain quantitative data from the portage workers, while Key informant interview (KII) was used to elicit qualitative information from their association leaders. Information was collected on the personal and socio-economic characteristics such as age, sex, religion, annual income, marital status, occupation, household size and level of education; types of agricultural based portage activities respondents are engaged in; and their level of and motives for involvement. The data collected were processed using statistical package for social sciences (SPSS) version 21. Both inferential and descriptive statistical analyses were carried out during this process. Descriptive statistical techniques used include frequency counts, percentages, means and standard deviations. Bar chart was used as appropriate.

### 4. RESULT AND DISCUSSION

#### 4.1 Socio-Economic Statuses of the Portage Workers

The mean age of the respondents was 36.89 years with  $\pm$  standard deviation of 8.92019 years (See Table 1). This implies that the portage workers were in their active age and still have the strength to carry out their portage activities. This finding agrees with Babatunde et al. (2014) which indicated that the average age of people actively involved in portage activities was 31.5 years but disagrees with Kwankye et al. (2009) which indicated that the age group of people that were actively involved in portage activities was between the ages of 15-19 years.

**Table 1:** Respondents by their Age, Sex, Marital Status, Religion and Educational Level (N = 190)

Variables	Frequency	Percentage (%)	Mean	S. D
Age (years)				
≤30.00	63	33.2		
31.00 - 40.00	68	35.8	36.88	8.92
41.00 - 50.00	43	22.6		
≥51.00	16	8.4		
Sex				
Male	129	67.9		

Female	61	32.1		
Marital status				
Single	51	26.8		
Married	108	56.8		
Divorced	4	2.1		
Separated	12	6.3		
Widowed	15	7.9		
Religion				
Christianity	107	56.3		
Islam	81	42.6		
Traditional	2	1.1		
Educational level				
None	55	28.9		
primary uncompleted	11	5.8		
primary completed	57	30		
secondary uncompleted	21	11.1		
secondary completed	46	24.2		

Source: Field survey, 2018

The Table further shows that majority (67.9%) of the respondents were males, which implies that men dominated the population of the portage workers in the agricultural commodity markets. This result is in line with the findings of Akanle and Chioma (2013) which asserted that women were compelled to join the portage trade as the economy grew worse in Nigeria. This finding is also in consonance with Argawal et al. (1997) and Opare (2003) that women's engagement in portage business is a recent phenomenon. However, this may be as a result of the fact that males are perceived to be the stronger gender and portage work is a very tedious venture which requires a lot of physical strength. The following KII excerpt further supports this claim:

*“This job is a very hard job, it is a job characterized by body pains, and there is no form of ease in it at all. This job is so tedious to the extent that we suffer from ‘awoka ara’ (body pains). If you are not strong enough, you cannot do this our type of work.” (A discussant at Odo-oba market, Ogbomosho)*

The results further show that more than half (56.8%) of the respondents were married and 26.8 percent were single. This implies that many of the respondents were married which indicates a sign of being responsible. This finding agrees with that of Yeboah and Yeboah (2009) who ascertained that majority of people that engage in portage activities were married. This may however be as a result of the fact that married people have responsibilities that drive them to engage in any available income generating activities to meet their household need. More than 56 percent of the respondents practiced Christianity and 42.6 percent practiced Islam. This implies that modern religion has taken over the communities in the study area and this could be attributed to the massive influence of western culture on both rural and urban dwellers in Nigeria.

Only 30 percent of the respondents completed primary education, 28.9 percent had no formal education and 24.2 percent completed secondary education. This implies that a large number of the portage workers had a low level of educational attainment which is why they could easily take up this portage job in a bid to secure their survival amidst the current economic hardship in the country. This result agrees with the findings of Afriyie et al. (2015) which asserted that since porters have a low or no formal education or employable skills and coupled with lack of initial capital, these factors makes “head portage” business a viable option.



The study further reveals that 65.8 percent of the respondents were non-natives of the communities where they were operating while 34.2 percent were natives. This implies that most of the respondents migrated from their communities in search of greener pastures. This is in consonance with Abass *et al.* (2013) that people often resort to migration when they cannot gain a secured livelihood in their homeland or cannot cope with adversities. About 47.4 percent of the respondents were attracted to the communities in order to secure opportunity for their livelihood, 35.3 percent got there through their parents, 11.6 percent through marriage while 5.3 and 0.5 percent were attracted to the communities due to the presence of markets and social amenities, respectively. This implies that most of the respondents who reside in these communities do so in a bid to secure their means of livelihood. The following KII excerpt further supports this assertion:

*“...this is my fourth year on this job, I left my family and my small farmland back in the east to travel down here when things became very difficult for me. Since when I've started this job, I have been able to settle my immediate needs and my plan is to save enough money so that I can travel back home and also try to revive my farm...” (A discussant at Ajegunle market, Atiba LGA)*

The study further reveals that 45.3 and 20.5 percent of the respondents had lived below 10 years and between 21-30 years, respectively, in their community, 17.4 percent had lived for over 30 years while 16.8 percent had lived between 11-20 years in the community with a mean duration of residency of  $18.2 \pm 14.093$  years of residency. This implies that most of the respondents have not lived for more than 18 years in the communities where they carry out their porterage activities and this may indicate a trend of migration among the porterage workers. This may be attributed to the fact that most of the porterage workers are non-indigenes of communities where they operate but are residing there to secure their means of livelihood and survival. About 34.2 percent of the respondents have a household size of between 3-4 people, 28.9 percent have a household size not more than 2 people, while 27.9 and 8.9 percent have a household size of between 5-6 people and over 7 people, respectively. The mean household size was  $4 \pm 2$ . This implies that most of the respondents have a small household size. This may however be as a result of the fact most of the population that are actively involved in porterage activities are still in their active childbearing ages, although their household sizes may tend to increase over time. This result agrees with the findings of Yeboah (2008) which indicated that majority of the porterage workers are between the ages of 16 and 35 years and that the active age of childbearing occurs within the same age group.

Data in Table 2 show that 45.8 percent of the respondents had less than 5 years of experience in porterage activities and 30 percent had between 6-10 years of experience with a mean of  $7.91 \pm 5.779$  years. It can be deduced that many of the people that engage in these porterage activities do not intend to make a career out of it, but they only do so as a temporary means of survival. They engage in it in order to raise capital for other profitable ventures.

**Table 2:** Respondents by their Age, Sex, Marital Status, Religion and Educational Level (N = 190)

Variables	Frequency	Percentage (%)	Mean	S. D
Years of experience				
≤5.00	87	45.8		
6.00 - 10.00	57	30	7.91	5.77
11.00 - 15.00	29	15.3		
≥16.00	17	8.9		
Major occupation				
Porterage activities	166	87.4		

Trading	10	5.3		
Artisan work	8	4.2		
Farming	4	2.1		
Driving	3	1.6		

Source: Field survey, 2018

This result agrees with the findings of Akanle and Chioma (2013) which postulated that many of the load porters entered the trade with the intention of getting money for more prestigious and less difficult jobs. Majority (87.4%) of the respondents identified portage work as their major occupation implying that most of the respondents engaged in portage activities as their major occupation. This is an indication that portage activities serve as their major source of income and means of livelihood.

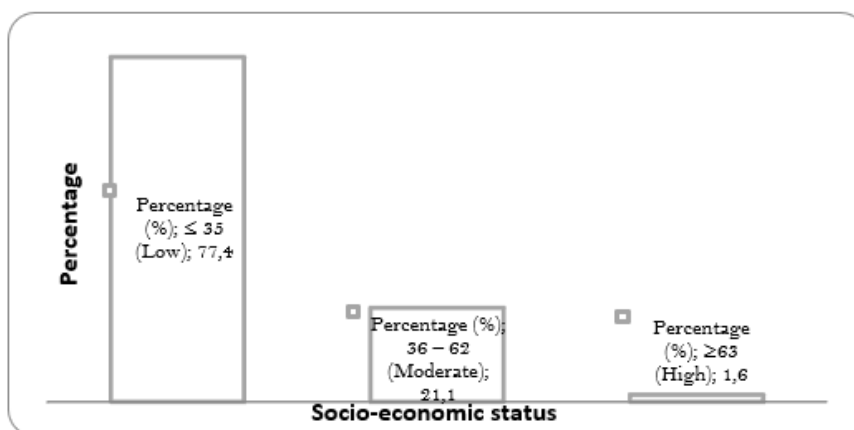
The study further reveals the mean annual income from portage activities as ₦264,505.26<sup>1</sup> (\$734.74) ± ₦145,095.47 (\$403.04). Comparing the mean annual income from portage activities with mean annual income from all sources, it shows that portage activities contributed about 77% to respondents' income and livelihood. This is an indication that respondents' involvement in portage activities is significant to their livelihood and survival. Concerning the type of health care services, the portage workers patronized, it was discovered that 27.9 percent of them patronized traditional means of healthcare, 25.3 percent patronized government hospitals, 22.6 percent employed self-medication, 17.4 percent were not using any form of medication, 3.2 percent patronized both quack doctors/nurses and village dispensary while very few (0.5%) patronized recognized hospitals. This implies that majority of the respondents were not patronizing recognized hospitals. This may however be as a result of the fact that most of these recognized hospitals charge huge sums of money for their services which were not affordable to portage workers because of their low-income level. This is in consonant with Yeboah and Yeboah (2009) which asserted that porters do not make enough money to seek medical attention from qualified personnel which has made self-medication to become a very common practice among them.

Majority (68.4%) of respondents lived in rented apartments, 19.5 percent were squatting, while a few (12.1%) lived in apartments owned by them. This may however be attributed to the fact that majority of the respondents were non-natives of the communities where they resided and worked. They were mostly migrants who have travelled in search of greener pasture and as such might prefer to acquire their own personal properties back in their towns and villages from where they migrated. Majority (76.3%) of the respondents did not own any automobile, while 23.7 percent owned at least one automobile. Furthermore, analysis show that from the percentage of respondents that own an automobile, 10.5 percent bought fairly used motorcycle, 7.5 percent bought new motorcycle, 4.7 percent bought fairly used car while a very few (0.5%) bought fairly used bicycle. This implies that majority of the respondents did not have the capability to purchase an automobile.

In overall, it was revealed that majority (77.4%) of the respondents had a low socio-economic status, 21.1 percent had a moderate socio-economic status while a very few (1.6%) had a high socio-economic status (See Figure 1). This implies that majority of the portage workers in the study area were low income earners and could be classified as people of low social class. This result agrees with the findings of Yeboah and Yeboah (2009) which postulated that load porters have very little or no education and are from low socio-economic class.

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<sup>1</sup> ₦360 = \$1.00



**Figure 1.** Overall socio-economic status of the respondents

**4.2 Agriculturally Based Porterage Activities: Types and level of involvement**

A list of agriculturally based porterage activities in the study area was documented. Results in Table 3 show that the most prominent porterage activities respondents were involved in was loading of goods back into the store for market sellers after closing hours (99.5%) followed by offloading of farm produce from trucks for the market sellers (67.4%); loading of agricultural commodities into trucks at the warehouse to be delivered to the market (61.1%); offloading of agricultural commodities from trucks into the warehouse for storage (61.1%); carrying of farm produce from the farm site to storage centre (61.1%); carrying of farm produce from the processing unit to storage centre (58.9%); offloading of farm produce at the processing unit (56.3%); head porterage for shoppers from the market to the car park (53.7%); head carriage of goods for the market sellers from their stores to their market stands (53.7%); head carriage of farm inputs (51.6%); head porterage of harvested farm produce to the market (50%); head porterage for door to door delivery of agricultural produce (43.2%) and head carriage of meat and meat product at the slaughter house (40%). This implies that most of these porterage workers carried out their operations till closing hours of market days and are mostly involved in loading and offloading of farm products. The results also indicate that majority of their activities are carried out around the market areas.

Detailed analysis further shows the extent to which the respondents engaged in the different agricultural related porterage activities identified in the study area. Using the grand mean score of  $1.65 \pm 0.478$ , the results indicated that activities such as: Loading of goods back into the store for market sellers after closing hours of market days (mean = 2.96); offloading of farm produce from trucks for the market sellers (mean = 2.01); loading of agricultural commodities into trucks at the warehouse (mean = 1.78); and offloading of agricultural commodities from the trucks into the warehouse for storage (mean = 1.77) were rated above the grand mean and were the activities the respondents were mainly involved in.

**Table 3:** Identification of Agriculturally Based Porterage Activities the Respondents are Involved in (N = 190)

Types of agricultural related porterage activities	Frequency	Percentage (%)
Loading of goods back into the store for the market sellers after closing hours of market days	189	99.5
Offloading of farm produce from trucks for the market sellers	128	67.4
Loading of agric. commodities into trucks at the warehouse to be delivered to the market	116	61.1



Offloading of agric. commodities from trucks into the warehouse for storage	116	61.1
Carrying of farm produce from the farm site to the storage centre	116	61.1
Carrying produce from the processing unit to the storage centre	112	58.9
Offloading of farm produce at the processing unit	107	56.3
Head carriage of goods for the market sellers from the stores to their market stands	102	53.7
Head portorage for shoppers from the market to the car park	102	53.7
Head carriage of farm inputs	98	51.6
Head portorage of harvested farm produce	95	50
Head portorage for door-to-door delivery of agricultural products	82	43.2
Head carriage of meat and meat product at the slaughterhouse	76	40

Source: Field survey, 2018

However, activities such as carrying of farm produce from the farm site to the storage centre (mean = 1.60); head carriage of goods for the market sellers from the stores to their market stands (mean = 1.58); head portorage for shoppers from the market to the car park (mean = 1.57); offloading of farm produce at the processing unit (mean = 1.49); carrying of farm produce from the processing unit to the storage centre (mean = 1.48); head carriage of farm inputs (mean = 1.44); head portorage of harvested farm produce to the market (mean = 1.41); head portorage for door to door delivery of agricultural produce (mean = 1.17); and head carriage of meat and meat products at the slaughter house (mean = 1.12) were rated below the grand mean and were the activities the respondents were least involved in. This implies that many of the portorage workers operate mainly in the commodity markets and are usually around the market areas till the closing hours.

Level of respondents' involvement in portorage activities was measured by the number of days involved in the activities per week, number of hours of involvement per day, mode of involvement and extent of involvement in the agricultural related portorage activities.

The study reveals that 52.1 percent of the respondents engaged in portorage activities for 6 days in a week, 28.9 percent work for 7 days, 13.7 percent work for 5 days, 2.6 percent work for 3 days, while 2.6 and 0.5 percent work for 4 and 2 days, respectively. The mean number of days per week was  $6.0105 \pm 0.9142$ . This implies that majority of the portorage workers engaged in different agricultural related portorage activities for between 6-7 days every week. This result agrees with the findings of Osotimehin *et al.* (2007) which indicated that a large proportion of portorage workers operate between 6 and 7 days in a week.

Concerning the number of hours per day, it was observed that 47.3 percent of respondents engaged in different agricultural related portorage activities for between 5-6 hours per day, 41.1 percent between 3-4 hours per day, 9.5 percent between 7-8 hours per day, while a very few (2.1%) worked for between 1-2 hours per day. The mean number of hours per day was  $2.64 \pm 0.68$  hours. This shows that majority of the respondents engage in portorage activities for about three hours daily. This observation might be due to the fact that portorage activities are very tedious and people who engage in them may not be able to work for longer hours before they get tired. On the other hand, it could be that their working hours were limited because of the duration of active marketing activities during which their services are usually needed.

#### 4.3 Reasons Motivating Respondents towards their Involvement in Portorage Activities

Results in Table 4 show the reasons that motivated respondents towards their involvement in portorage activities. When the grand mean score of  $3.74 \pm 0.37$  is compared with each of the individual mean score, reasons such as: no special skill is required (mean = 4.22) and no capital required to start (mean = 4.21) among others, were very important; while reasons

such as: the job is lucrative (mean = 3.32); there is nothing else to do (mean = 3.31); the job is seen as a hobby (mean = 1.85) were the least important reasons that motivated the respondents towards their involvement in porterage activities. This implies that major reasons that motivated the respondents in getting involved in porterage activities was the fact that the porterage work does not require any special skill and also does not require any capital to start. Some of these findings support that of Osotimehin *et al.* (2007) that ascertained some of the factors that motivated porterage workers as: it serves as a source of livelihood, there is nothing else to do and that the job is seen as a hobby. This is also in consonance with the findings of Akanle and Chioma, (2013) which asserted that many porterage workers get stranded in the trade as they get used to it because of the capacity of the trade to provide daily income and meet immediate needs.

**Table 4:** Reasons Motivating Respondents towards their involvement in Porterage Activities (N = 190)

Motivational reasons	Mean	Standard Deviation	Rank
No special skill required	4.22	0.535	1 <sup>st</sup>
No capital required to start	4.21	0.568	2 <sup>nd</sup>
It serves as a source of daily income	4.21	0.446	3 <sup>rd</sup>
It serves as a source of livelihood	4.18	0.471	4 <sup>th</sup>
It helps to cater for household needs	4.13	0.553	5 <sup>th</sup>
lack of employment	4.12	0.505	6 <sup>th</sup>
It helps encourage savings investment in other profitable ventures	3.91	0.784	7 <sup>th</sup>
The job is lucrative	3.32	1.220	8 <sup>th</sup>
There is nothing else to do	3.31	1.128	9 <sup>th</sup>
The job is seen as a hobby	1.85	1.098	10 <sup>th</sup>
Grand mean: 3.74; Standard deviation: 0.371			

Source: Field survey, 2018

#### 4.4 Constraints Limiting the Involvement of Respondents in Porterage Activities

This section was developed with a view to investigating the degree to which selected constraints identified from literature were affecting the involvement of the porterage workers in agricultural related porterage activities.

The results in Table 5 indicated that when the grand mean 0.82 was compared with each of the individual mean score, constraints such as harsh weather condition (mean = 1.66); exposure to physical risk (mean = 1.56); harassment from patrons (mean = 1.05); poor health condition (mean = 0.97); and stigma attached to the job by the society (mean = 0.95) were the most severe constraints, while underpayment for services rendered (mean = 0.79); insult from family members and friends (mean = 0.78); poor working conditions (mean = 0.43); lack of job security (mean = 0.38); lack of appropriate equipment (mean = 0.31); and lack of support from government (mean = 0.16) were the least severe constraints. This implies that harsh weather conditions which may range from heavy and torrential rainfall to extremely hot and scorching sun does hinder these porterage workers from carrying out their porterage activities promptly. Also, constraints such as exposure to physical risk which may be as a result of the environment in which they carry out their operations, harassment from people who patronise them, poor health condition and stigma attached to the job due to its nature hinders to a large extent, the porterage workers from active involvement in porterage activities. This result is in line with findings of Akanle and Chioma, (2013).

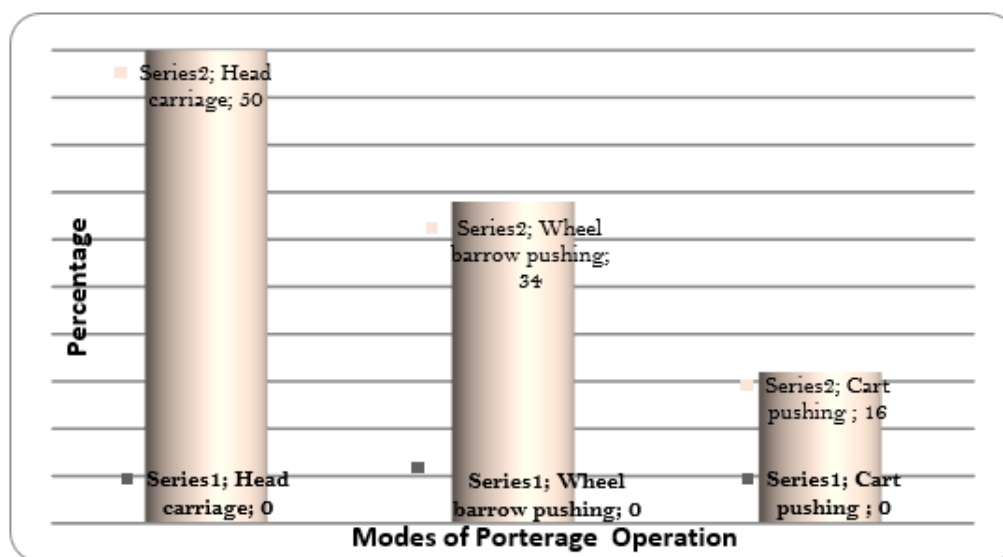
**Table 5:** Constraints Limiting Involvement in Porterage Activities (N = 190)

Constraints	Mean	Standard Deviation	Rank
Harsh weather condition	1.66	1.147	1 <sup>st</sup>
Exposure to physical risk	1.56	1.100	2 <sup>nd</sup>
Harassment from patrons	1.05	0.941	3 <sup>rd</sup>
Poor health condition	0.97	1.002	4 <sup>th</sup>
Stigma attached to the job by the society	0.95	0.913	5 <sup>th</sup>
Underpayment for services rendered	0.79	0.917	6 <sup>th</sup>
Insult from family members and friends	0.78	0.836	7 <sup>th</sup>
Poor working conditions	0.43	0.730	8 <sup>th</sup>
Lack of job security	0.38	0.716	9 <sup>th</sup>
Lack of equipment	0.31	0.546	10 <sup>th</sup>
Lack of support from government	0.16	0.504	11 <sup>th</sup>
Grand mean: 0.82			

Source: Field survey, 2018

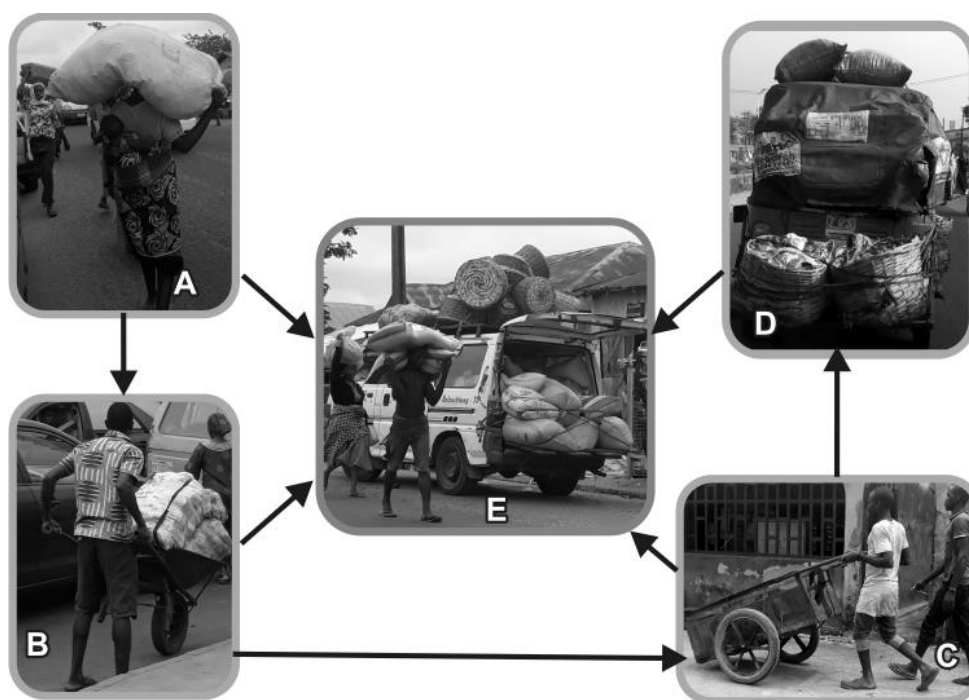
#### 4.5 Transformation in Porterage Operation and Farm Products Transportation System

In recent time a lot of transformations are being observed in the way porterage workers are operating. Traditionally from inception, porterage operation was mainly done through the use of head carriage. For instance, this study reveals that half (50%) of the respondents use head carriage as a means of helping patrons move their items (see Figure 3). Head carriage is thus an economic activity in the sense that anyone that helps another to carry a load. They provide a link among the wholesalers, retailers, transporters and the end users. They carry item purchased by shoppers, sometimes following their hirers from stall to stall, struggling to find their way in congested, poorly laid-out and sometimes muddy urban markets.



**Figure 2.** Distribution of respondents by modes of porterage operation  
Source: Field survey, 2018

Today, transformation is taking place in the portering operation, some of the porters, most especially men are gradually moving from head carriage to wheel barrow pushing (34.2%) as a means of portering operation, which is easier than head carriage. Wheel barrow is less stressful and can carry a large amount of agricultural commodities. However, it is yet to be motorized as experienced in some countries like China. Also, cart pushing (15.8%) as part of transformation is gradually gaining prominence among the male portering operators; it serves the same purpose as wheel barrow. This portering operation also eases the movement of agricultural commodities. Photographs in Figure 3 show the various forms of rural transportation available in south-western rural markets. Labels A - D show gradual transformation from head portering through wheel barrow, cart pushing to a motorized tricycle culminating into servicing rural buses.



**Figure 3.** Photographs showing transformation from head carriage to a motorized tricycle. Keys: A - A female porter on head carriage; B – A male porter on wheelbarrow pushing; C- A male porter on cart pushing; D – A motorized tricycle carrying loads; E - A bus with loads of market products for transportation.

## 5. CONCLUSION

This paper established portering as an important link for effective transportation system in rural markets of Nigeria being operated mostly by people of a very low socio-economic status with low income and education. Portering has become a sub-system in rural market transportation system, which functions in transit connecting the markets sited in remote and unmotorable places with motor vehicles on the accessible roads. The portering workers operate on an average of 6 days in a week and about 2hrs 30 minutes per day without requiring any special skills or any initial capital, but they are mostly confronted with harsh weather condition and exposure to diverse physical risks. However, there is a current transformation taking place in the mode of portering operation with a gradual replacement of head carriage with wheel barrow, cart pushing and advancement into a motorized tricycle. This is a strategic way of reducing the stress and energy involve in the traditional portering

operation without losing the purpose of connecting the bad inaccessible roads to better accessible roads in agricultural commodity transportation system.

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